

Disinformation, Science Communication and Trust: Food Rumours in Thailand

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Abstract

False information on the internet is one of the important global agendas. It becomes much more intensive since the rise of social media uses. The information leads people to have false beliefs and actions. There are many types of false information on the Internet. However, the food rumour is an influential issue attracting attention from social media users, especially in Thailand. It is normally composed of attractive headings and false scientific claims in order to convince the readers. One of the effective solutions to this problem is delivering the debunking of the information to the public, preventing them from misunderstanding these rumours. Since the rumours have contained scientific claims, debunking rumours, as a result, is a part of science communication.

This study has three parts; rumour content, experts and people. This is paralleled to three empirical studies; disinformation in rumours, science communication from debunkers and the way people trust in the rumours and the debunkers. The thesis begins addressing the questions of features of food rumours on Facebook in Thailand during 2013-2016 because this period represents a huge increase in the use of social media. The feature of rumours will be completed by analysing the content. The following part explores the response from relevant stakeholders by in-depth interviews of government, social influencers, NGOs, media agencies and private sectors. The outcome of the interview will give us an idea of the current status of science communication. The last component goes back to people, as a layperson, assuming that they do not know about science. The study will investigate trust in the way they trust in rumours and in debunkers by an experimental survey. The experiment will give the results as to the source that people have more trust in; the government or the social influencer. The overall outcome hopes for people to detect rumours, help experts develop better science communication and encourage people to develop their science knowledge skill

Acknowledgement

This thesis is developed from my intention that people should be highly aware of consuming online information. We are at risk of unverified information everyday especially from social media. At this time, March 2020, we are now facing the pandemic of COVID-19 as well as COVID-19 rumours, news or information. We will have to be conscious of reading, considering and perceiving information all the time.

According to the reasons included in this thesis, I have worked on online food rumours with the aim that people should have guidelines for detecting false online information in order to protect themselves from gaining false beliefs.

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Chapter 1

Introduction

On 25 August 2016, a news item in Thailand reported that an old woman had been sent to hospital after she was found vomiting blood. Her granddaughter found out the reason for this and later posted a story on her Facebook account, saying that her grandmother had followed information she had found on the internet for cancer treatment and drunk lime and soda. This incident reminded me of the hoax claiming lime and soda to be an effective cancer treatment which was influencing individuals, even though it had been proved false (Snopes, 2011).

This represents a further example of how the impact of unverified information from the internet misleads people's beliefs and behaviour, and more importantly, it relates to issues connected with food and medical treatment. Since the 1960s, the way people perceive many other types of risk has been an essential element in psychological and sociological research (Allum, 2005). There are no gatekeepers to internet access and therefore social media platforms offering a large amount of false and unverified information on health issues lead to health risks for the population at large.

Online unverified information on food does not, however, always generate food risks, or determine a substantial and serious risk to people's health. This is because it is up to everyone who reads about a 'food rumour' online to decide whether to follow it or not. In addition, not all food rumours – even if followed through by individuals – are capable of posing a serious risk to people's health. For example, a food rumour suggesting people to "eat[...] extra ripen bananas because the brown patches can eliminate abnormal cells", which proved untrue (Australian Associated Press, 2019), can unlikely aggravate people's health.

Food risk has been studied regarding “food safety related risk” (Yeung and Yee, 2005); “food risk perceptions” (Roosen et al., 2004) and “food risk communication” (Lofstedt, 2006). “Food safety related risk” studies food in terms of the safety of eating, the contamination of food, for example, bacteria, vomiting or serious illness (FSA, 2000; ERS, 2001) leading to the concern of food poisoning (Yeung and Yee, 2005).

Food safety is a public health issue because it is a world-wide issue with universal implications (Gizaw, 2019). A systematic literature review of common public health risks related to food safety, shows that there are seven aspects of food risk: microbial contamination of foods, chemical contamination of foods, food adulteration, mis-use of food additives, mislabelling, GM foods, and foods past their use-by dates (ibid, 2019).

Food risk situations have been exposed in the media, making links to “food risk perceptions”, in other words, the way individuals decide about the level of risk. Roosen et al. (2004) concluded that risk perception is concerned with food risk an example being a study by Carson (1962) about pesticides and the rejection of GM foods, BSE and other food safety issues.

Different public perceptions are based on individual experiences and background meaning that when communicating food risk to the public, information should at least be clear, accessible and evidence-based. Understanding public perception is necessary for designing “food risk communication”. Fischhoff et al. (1978) stated that individuals perceive risk differently from others in terms of degree of control, catastrophic potential, and familiarity. Less (1996: 86) described “risk communication” as “... the flow of information and risk evaluations back and forth between academic experts, regulatory practitioners, interest groups, and the public...”. This assumes that individual members of the public would be able to respond and convey their evaluations back to the experts.

The flow of the communication is circular, not top-down. The explanation of food risk and related terms gives the idea of food as a risk to public health through contamination and poisoning.

The situation concerning food risk goes hand in hand with the parallel study of “rumours about food” as a core element of this study. Rumours about food have played a role on the Internet ever since the start of chain emails. Unlike food risk, the food rumour is all about the “online content”. An online message has the impact to persuade people to believe the claim. For example, there was a statement claiming “eating late at night causes weight gain” while the fact is that weight gain is about calorie intake, not time restrictions (Buckingham, 2018); “eating chocolate will give you spots” even though there is no evidence to substantiate this (Healthforteens, 2020). These types of content have been described as “nutrition rumours”, plaguing the internet with lies about food and misinformation on eating patterns (Buckingham, 2018). The scope of this study focuses on food rumours in the areas of real food, for example, bananas, chicken or mushroom and two types of claims about health; dread of sickness and the wish for treatment. The terms ‘dread rumour’ and ‘wish rumour’ are used in this thesis to explain these concepts.

The definition of “food rumours” has developed from the concept of “rumours.” Most studies have defined rumour as “unverified and instrumentally relevant information statements in circulation” (DiFonzo and Bordia, 2007). However, Cai et al. (2014) and Liang et al. (2015) defined rumour as “an item of information that is deemed false”. Zubiaga et al. (2018) argued that rumour is unverified information which could turn out to be true. They finally stated rumour as “an item of circulating information whose veracity status is yet to be verified at the time of posting” (ibid, 2018:32:2). The

definitions are slightly different. Stating a rumour that later proves to be false is not wrong as it likely to achieve its purpose.

One purpose of rumour is its use as a marketing technique to increase demand in products – the commercial (Abdelkader and Mohamed, 2018). It is about confusing other companies by distorting information, creating fake stories or using only partial truth – later the rumour can become a major source of a crisis for commercial organisations (ibid, 2018). Fearn-Banks (2007:81) defined a rumour as “... information passed by word of mouth and social media with no verification of fact and no credible source...”

Obviously, the relevance of food rumours in Thailand has been amplified by the impact of social media. Issues about food (e.g. its safety and nutritional qualities) normally catch the attention of the public as they relate to people’s everyday lives and their health. As a result, food has often been used as a clickbait in online platforms and social media in particular. The more people are interested in something (such as food and nutrition), the more online business are investing in it to maximise people’s engagements and, ultimately, their profits. However, it can be tricky to bring users to visit websites packed with advertisements which also extract the maximum value from their visits (McGregor, 2017). This is tricky as not all websites provide accurate information. Fake information about food and health would, indeed, draw people’s attention and play with their concerns.

According to the Fearn-Banks’ s definition (2007); Liang et al. (2015) and Zubiaga et al. (2018), rumours are about the passing of information without verification and/or any credible source. Therefore, food rumours in this study will be regarded as unverified information about food, which is circulating in an online platform.

It is important to note that the effects of an online food rumour are quite extended. The misperception of food rumours as accurate information could lead to health risks or food risks because they could lead to food scares, changes in eating patterns and health treatment choices. For example, one might post the headline message “eating chocolate will lead to cancer because of these reasons!” with a related link inducing people to click on it to read the whole article on the website. Since the website usually contains many adverts together with the text of the article, one click means that people may also see and engage with the adverts. It also means that the owner of the website makes money out of these engagements. High levels of access on a given website also led sponsors to put more adverts on the website. This process is how the online business earns revenue. The business will earn more revenue from adverts viewed when people engage with the website.

A science social influencer, as a key concept in this study, is a person debunking unsubstantiated online information. It develops from the concept of social influencer, an online opinion leading person who could shape the audience attitudes using social media (Freberg et al., 2010).

It can be noted that the role of social influencer in Thailand started from the area of business and marketing, especially the cosmetics industry where consumers experience and share their thoughts online regularly. Later, after they have gained respect, trustworthiness and popularity, they naturally become social media influencers (Vonglek, 2014). This has allowed people to have alternative sources of information if it comes from genuine users. People are closer to the real information and are not only being influenced by an advertisement. The online platform has rapidly gained more users. A ‘science social influencer’ or ‘science influencer’ in this study, is similar to a

general social influencer because they assume the title of being an expert or an academic. As this thesis will show in chapter three, people seem to be likely to rely on them as a source of scientific knowledge as well as trusting them as beauty influencers.

Food rumours are related to risk in terms of media representation. Beck (2009) confirmed that media representation of risk is highly selective, implying that the information presented by media could be distorted or biased. In short, this also means that the way food rumours are presented on (social) media shapes people's perceived risk: in articles on food (and beyond) headlines are designed to catch the attention of the audiences; people are therefore attracted by such headlines and read articles which may contain food rumours; this may lead some people to feel anxious about the food system through the creation of food scares (ibid, 2009:188). In essence, food rumours are mostly made up from selective information available on (social) media.

Some rumours in the data collection repeatedly circulated online e.g. Lime and soda for cancer treatment. It has been found online discussion 2013 (Pantip,2013); debunking in 2014 (Dailynews, 2014); debunking in 2015 (Sanook.com, 2015); reporting people vomiting from taking it in 2016 (Thairath, 2016a); debunking from Food and Drug Administration in 2017 (Sure-Oryor, 2017); debunking in 2020 (Antifakenewscenter, 2020) and new rumours continue to be released. Generally, food risk, unlike food rumour, is about a problem about food safety related risk to health confirming that there is a hazard in certain food and government action, for example, restricting the import of certain foods helps to decrease fear among people.

Thailand has remained top of the volume of social media users for several years, having 47 million Facebook users in 2017 (Fredrickson, 2017), and that number is predicted to continue to grow (Statista, 2020). This platform allows the exchange and sharing of

information while contacting and connecting with friends and family. It has also become a means for individuals and business sectors to promote sales and advertise. Since the platform allows people to generate their own content, it does not guarantee that the quality of the information is accurate.

False food information in the media has caused catastrophic consequences. It has led to people becoming worried or scared. Historical examples can be seen in food scandals in Europe and China, where people had serious food scares during and after the incidents. This caused drops in sales as well as bans of imported food. For example, the China meat scandal in 2014 found video footage showing contaminated and expired meat in the Hushi Food Group factory in Shanghai. The expired meat products were re-labelled with new expiry dates. This factory supplied meat products to McDonald's, Starbucks, Yum Brands and Burger King among others. As a result, some companies later decided to end their business with the factory. McDonald's has switched to another supplier (Forbes, 2014). The Chinese government later banned the products. The sale of McDonald's chicken nuggets and fillets was stopped in Shanghai branches. The scandal further affected Japan where there was around a 20% drop in chicken meals (ibid, 2014).

Another example of online media influence was a recent case in 2020 where a random map showed photos of bushfires in Australia, giving the impression that the land was full of fires (Rannard, 2020). This unverified information caused huge confusion. It is a challenge to stop people immediately believing information when they have been bombarded by an overload of shared information.

Misleading information often continues to be released on various issues, and stopping it is a serious challenge (Hyman, 2019). Facebook features attempt to develop algorithm e.g. decreasing the number of clickbait-like or newspaper-like contents, however, the

process of authenticating takes long time reflecting the inefficient method (Pourghomi et al, 2017). The false information is likely to stay on the internet where it can be shared, captured, or stored. However, developing media literacy would help as a starting point for people to be more sceptical about illogical and unsourced information (Ascott, 2020). Media study preparations help successfully to deal with disinformation by supporting people to be critical to all media (McDougall, 2019)

As a result, the questions that motivate this study are: how can we support people to be sceptical of online information? Are there any responsive actions from experts or the government towards false information on the internet? Will they regard it as an unnecessary issue? Why trust in online information? These questions led me to the conclusion that this study should be composed of three parts: one on the debunking messages, one on the experts as a debunker, and one on the people and their trust to expert's message. Rumour messages need to be analysed, coded, and concluded, to become a set of guidelines for detecting future rumour messages. It is necessary to explore the extent to which experts have acted on this problem. I believe that the long-term solution to exposing food rumours is that accurate knowledge is communicated from experts to the public. The public will learn more about science from the debunking of food rumours. Not only will I study the ways experts debunk rumours and communicate, I will also attempt to find a better method of communicating scientific information to the public. Additionally, I would like to understand the ways people place their trust in rumours.

This outcome of this thesis aims to be beneficial and put to practical use. The extract of the characteristics of rumours will present some common aspects of the rumours. The categorised rumours help people to be sceptical about content on the internet. Food

rumour itself is neither fully an issue of food safety nor entirely fake news. It is sometimes not reported in the mainstream media, and rumours are only debunked by social influencers. Food rumours are composed of statements about food, additional statements of science knowledge used, claims of health treatment or protection, plus the moods and tones of the messages. Since there should not only be the government and social influencers who observe the issues, but also media agencies, and science and food sectors. Collecting data from them would help me to deduce the extent to which food rumours have been considered.

Lastly, inputting the concept of trust is a key aspect because it will represent the extent that people know about the rumour, what they think when they read it and which debunking sources are more trusted in the experimental survey. The last empirical chapter will complete the study. The thesis has been organised into six chapters, with three empirical works through three mixed methodologies.

Chapter two is the literature review, beginning with disinformation and misinformation, risk perception, risk communication, food safety, followed by social media research, science communication concepts and trust. The literature review does not apply the systematic process because this process is only conducted in Web of Science, Scopus etc. They do not include the literature that relates to this study. However, the search strategy and the search terms are provided. There will be a discussion on whether food rumours can be both disinformation and misinformation. The section of risk communication and risk perception are added in order to explain the rumours as risk issues. There will be a discussion to explain the difference between food safety and food rumour. A review of previous social media research will explain the extent to which the online platform has been studied. Science communication concepts and models will be the key framework of

analysis of the debunking of food rumours and the communication of science in Thailand. Trust will be the last concept that will be represented. Trust in social media, trust in science communication – which media sources can be trusted – and trust in disinformation in the Thai social media community will be outlined. Last, the limitation of the study will be analysed.

Chapter three is the first empirical chapter with content analysis on food rumours. It extracts the characteristics of food rumours, categorising and coding them into themes. This coding aims to be a guideline for detecting future rumours. There are 73 rumours included in the content analysis collected from 2013 to 2016. This timeframe represents when more people started to join the social media platform and started experiencing online information as well as many rumours occurring and repeatedly appearing. Using the Facebook platform to collect secondary data is truly challenging because the data is not well organised, unlike with Twitter which has the hashtag search (#). There will be a discussion of how rumours were collected through the ground theory. I collected original rumour messages from a science social influencer's Facebook account. All the debunking posts are set to public view. The steps of content analysis are to organise each rumour into a condensed meaning unit, a code, a category and finally a theme. The results will show the final themes that have been analysed from 73 food rumours. There will be a discussion about linking food rumours to health problems and service in Thailand, reflecting local food and relationships with friends and family. Last, will be the reflection of limitations.

Chapter Four, the second empirical chapter, contains in-depth interviews with all the food, media and science experts, including the government, media agencies, NGOs, academics, private hospitals and social influencers, who have seen incidents of food

rumours. The in-depth interview method is suitable to obtain their experiences and actions on the rumours. The total number of 21 interviewees, who have different methods of science communication. The analysis from the interviews will verify the level of science communication in Thailand. There will be a discussion about how the deficit model clearly still supports the growth of science communication in Thailand. The discussion extends to how the success of science communication and the extent of the deficit model are explicit in Thailand. Last, there will be the reflection of limitations.

Chapter five, the last empirical chapter, presents the experimental survey on trust. The experiment explores the way people trust in two types of rumours and debunking sources. One dread rumour and one wish rumour are in the experiment. There will be a discussion about why these two rumours have been selected. The debunking sources are the government and a social influencer. They both debunked the two rumours in the experiment.

There is a total of twelve hypotheses tested, six each for the dread and wish rumours. The survey asks the participants to read rumour messages and rate their trust on a Likert scale. Later they are assigned to read one of the four debunking conditions. The first two of the four conditions are a true match of message and source, one from the social influencer and another from the government. The other two conditions form the experiment, where the message and the source are swapped. This tests whether the message or the source has a bigger impact on trust. This part of the study explores whether the public places more trust in the government or in social influencers. In addition, it tries to obtain the style of messages that work effectively when delivering to the public. The results mostly reject my prior assumptions, and the government still receives higher trust compared to social influencers. I have concluded that science social

influencers have not necessarily become the most reliable sources since there is only a narrow difference in the trust scores. Last, there are the reflections of limitations.

Chapter six is a recap of the whole thesis. There is a discussion section added in relation to the body of work. A summary of the background of the study and the outcome of it will be given. The further discussion is about greater public understanding of science supporting the use of the deficit model in science communication. Last, it is a reflection on the theoretical implication, limitations and a suggestion for future research and policy outcomes.

Chapter 2

Literature Review

2.1 Introduction

The literature will engage several aspects: disinformation and misinformation, social media research, science communication, risk communication, risk perception and trust. This is because food rumours are related to the publishing of distorted information on social media. The food rumours are normally made up of a misuse of science knowledge with a statement of health risk about food. Food rumours have then provided the aspects of science and risk. As a result, it would be useful to further the literature to science and risk communication. This study will focus on science communication, specifically the way experts, and other stakeholders, speak to the public using the social media platform. The last concept “trust” is the binding point between people, the information, the people and the debunker. Trust in false food rumours implies an absence of scientific knowledge in people, and that they are deceived by falsely invented information. Trust could be one tool to help fill this absence (Luhmann, 1989; Earle and Cvetkovich, 1995).

These relevant concepts would help to explain the food rumours. However, the history of rumours are not able to be sequenced correctly because there are several of them happening at different times. Focusing on the rumours from 2013 to 2016 would help us to direct the situation of it. These 4 years could be suggested as a peak time, because more people were registered on Facebook and it was also the coming of many online and website businesses. Over 70 public rumours were collected from a science influencer’s Facebook regarding his debunking.

2.2 Search Strategy, Search Terms and Limitations

There needs to be an explanation of the search strategy, search terms and limitations. It will provide the structure of the literature.

2.2.1 Search Strategy

I searched articles and journals on University of Essex databases, Web of Science, Google Scholar, Health Communication, Journal of Communication and theses and dissertation from ProQuest. The initial search started from the University of Essex (Encore) databases in all fields and later filtering to find journals about food and risk e.g. food, culture, and society. I considered the titles of the results and chose the literature that is engaged with “food” as a priority.

2.2.2 Search Terms

The main search terms include “food scandal” “misinformation” “misinformation on food” “food risk” “risk perception” “food risk perception” “risk communication” “food risk communication” “science communication” “disinformation” “disinformation on food” “trust” “social trust”. Additional searches are regarding the methodology because of the research undertaken on the Facebook platform; “social media use” “social media research” “Facebook research” [AllFields]. All the keywords searched were also filtered under social science studies.

2.2.3 Limitations

I decided not to conduct a systematic literature review as it would have led to the selection of studies mostly within mathematics and psychology, which have little relevance to the aim of this study and its research questions. In addition, this method would have led to neglecting books and book chapters which, despite not being present in e.g. the Web of Science or Scopus, would have been extremely relevant to the thesis.

The literature review focused on misinformation, disinformation, food scandals, fake news; all keywords that I repeatedly searched through the social science literatures.

2.3 Disinformation and Misinformation

Essentially, food rumours can be in the form of both disinformation and misinformation. These have the same characteristics but have slightly different definitions. Disinformation means ‘...the inaccurate and misleading information with an intended purpose to deliberately mislead and/or deceive...’ (Tilbury, 2017: iv). Misinformation is ‘...inaccurate information because of an honest mistake ...’ (ibid, 2017: iv). Food rumours then, are disinformation and misinformation at the same time. It starts from its creators aiming to mislead people, but the content could be an honest mistake. However, it is difficult to prove the intention. One reason for publishing false food rumours is the benefits for online businesses, where the publisher can earn money by reaching a certain number of visitors to their website. They can publish attractive information inducing people to click on the link and read their website. Thus, my assumption is that the rumour in Thailand is more disinformation than misinformation because the aim is to mislead online users.

These types of information have considerable negative impacts on humans and society. They may cause confusion and fear as they misrepresent whilst carrying errors and out-of-date information (Tudjman and Mikelic, 2003). This also includes subjectively mistaken and/or misleading information (ibid, 2003). The motivation to create and spread disinformation, propaganda or fake news is actually because of one or more of these reasons: ideology, money, status and/or attention (Marwick and Lewis, 2017).

The discussion of disinformation about food will be in three themes: food scandal, false content on social media, and disinformation and rumour.

2.3.1 Food Scandal

Food scandal incidents give an idea of the negative consequences after people have perceived the unwanted information within them. Food scandal causes food fear, and O'Doherty Jensen (2011) explained that this is caused by a confirmed sudden incident of a foodborne illness, which leads to a considerable decrease in consumer demand. There was a food scandal in Europe in 1996 known as BSE (Bovine Spongiform Encephalopathy), and it was claimed that the disease called New Variant Creutzfeldt-Jakob could be transmitted to humans. This caused a considerable decrease in beef consumption of around 20–60% over several months (Fischler, 2002).

A second BSE crisis occurred in 2002 in France without notice, and French authorities did not prepare solutions. A cow was diagnosed with BSE as it came from the slaughterhouse. Regrettably, all the animals were killed. As in 1996, the consumption of beef in France dropped significantly by 50% (ibid, 2002). The two crises had common aspects. More BSE crises were later reported in Belgium, the Netherlands, Denmark, France, Germany, Portugal, Switzerland, Spain and Italy (Banati, 2011). In 1999, there was a dioxin crisis, or the Belgian dioxin affair (ibid, 2011). It involved a chemical called polychlorinated biphenyls (PBDs) and one gram of dioxin was accidentally put into recycled fat for the processing of animal feed in Belgium. This immediately turned into a major food crisis, and the sales of poultry and pork dropped by over 60% (WFR, 2001). The horsemeat scandal in 2013 was another shocking incident. This originated in Ireland as a food safety authority tasted cheap beef burgers in a supermarket (Lawrence, 2013). They found that one third of burger samples contained horse DNA, and they also repeated the testing (ibid, 2013). The UK was alerted to this scandal because the Irish and UK supermarket supply chains are highly connected (ibid, 2013). Thus, the industry

in the UK started to test beef products and report frozen beef for some supermarkets, for example, Tesco's and Aldi's products produced by French manufacturer Comigel. This company exports cheap beef to 16 countries. The scandal suddenly became widespread within the EU. Many European countries, such as Germany, Sweden and the Netherlands, withdrew horsemeat meals. The horsemeat scandal is a highlighted case of the fragility of the food supply chain in the UK, and there have been other food scandal incidents (Whitworth, Druckman and Woodward, 2017).

While food scandals cause a loss of consumption demand, sales, consumer trust, stability of food supply and a challenge to the performance of food authorities in dealing with the problem, the negative image may not be separated from the actual food. A number of other food scandals have also hit Asian countries, especially China. For example, there was the baby formula milk one in 2008. This milk killed six and left 300,000 babies ill (Foster, 2011). Later, there were the tainted pork and the clenbuterol in snake meat scandals in 2009 and 2010 respectively. Around 70 people became ill after eating the contaminated pork (BBC News, 2009). Clenbuterol is a banned chemical because it can cause nausea, dizziness or death in humans (Jiang, 2011), but it is used to prevent animals from gaining too much fat (BBC News, 2009). 13 Chinese people in Shenzhen became ill after eating snake meat that had been fed with clenbuterol-contaminated frogs. In 2011, beansprouts contaminated with sodium nitrite and urea were found. Sodium nitrite can be carcinogenic for humans (AP, 2011). This was a serious problem and the authorities were unable to tackle it. The illegal use of gutter oil in cooking occurred in Taiwan and China in the years of 1985, 2000 and 2012. This oil is recycled from waste collected from restaurant fryers, drains, grease traps and slaughterhouses (Lu and Wu, 2014) and is sold as cooking oil. It is not surprising that gutter oil use is a

dramatic issue in food safety in China, as it is harmful to human lives. Besides it being disgusting, it also contains carcinogens and other toxins (Badkar, 2013). All these scandals are examples that show that they have happened almost every year. The scandals of fake food in China, for example, fake eggs in 1994, fake wine and tofu in 2011 or fake peas in 2005, 2006, 2007 and 2010 (Ross, 2012), have affected the perception of rumours about food. Food scandals from other countries have also influenced food risk perception. Most food scandals in China have been about fake food stuffs.

These scandals have caused an instability of food safety standards, especially in China where food scandals have been recorded almost every year. In addition, these have reflected the efficiency of food authorities in how they have been able to tackle the problems. China has inevitably been suspected to have poor quality food management. Individually, the scandals have apparently caused higher risk perception among consumers, which is shown by the decreasing amount of sales. Former food scandal incidents in China have already been labelled with negative images and these seem to be a problem when dealing with government agencies and related stakeholders. The problems may be caused by the food itself but they are enlarged by the influence from the media.

One key issue making food scandal a larger matter is about media consumption. Laypeople and experts assess risk in different ways depending on their professional backgrounds. Therefore, the enormity of a crisis and the public response depends on how the media describe the level of risk. Public reactions to food scares and food health are understandable, whereas the media has already selected which information to present, and perhaps how to present it (McCluskey and Swinnen, 2011). Media coverage has normally influenced people's perceptions of social risk (Kone and Mullet, 1994);

however, it is difficult to gauge the actual risk based on media disclosure (Liu and Ma, 2016). People are more likely to have higher levels of food risk perception if their countries have many food scandal incidents that are covered by the media (Liu and Ma, 2016). The media effect of food scandals is a function of information accessibility and media receptivity (Fleming et al., 2006). People who have more information channels tend to be affected by media exposure (Wahlberg and Sjoberg, 2000). Liu and Ma (2016) suggested that people who are separated from media exposure are not affected by media reports on food scandals in terms of their levels of concern. Arguably, it is almost practically impossible for people to avoid the power of the media. The consumer also tends to place more weight on negative rather than positive information (McCluskey and Swinnen, 2011). In Europe, the BSE crisis showed that the conflicting messages broadcast by the media combined with a lack of collaboration of risk management decisions and measures caused a loss of trust in authorities and the food supply (Banati, 2011).

Rumours about food may not cause as catastrophic consequences as food scandals. However, they may be elicited from the wide circulation of food safety risk and they can amplify social fear and deteriorate social instability (Liu and Ma, 2016). However, the issue is more complicated in social media. Content appearing on social media is hard to get rid of because its diffusion is much faster and uncontrollable. While social media offers freedom of space for online information, it also contains unverified content. Online users perceive a higher risk because the platform connects friends to friends, where trust is exchanged between senders and readers. Controlling or removing online food rumours is nearly impossible. As a result, media literacy skills and science knowledge could support people to be sceptical about online information.

Food scandal incidents give more intensive negative effects on society and humans, and the situation is also enlarged by the media. Likewise, this will draw together food rumour with social media, as the media affect people. However, the extent of misunderstanding is not obvious. The incident has a rather smaller scale when compared to food scandals.

2.3.2 Fake News and False Content

Generally, fake news, false content or rumours mostly concern dramatic issues such as disasters, political conflicts or health. Most studies on rumours within social networks have focused on technological aspects of how rumour is spread (Situngkir, 2011). There were rumours about deaths of public figures such as Jackie Chan and Nelson Mandela in 2011, while they were both still alive at that time (ibid, 2011). Situngkir (2011) studied the rumours spread on Twitter about the death of an Indonesian public figure. The rumour was started by a general Twitter user, who did not have many followers, who posted a question about whether the public figure was dead or not. Unexpectedly, there were suddenly thousands of tweets containing condolence messages, reaching 50,000 users and being retweeted by 59 social influencers in different cities within two hours. Allcott and Gentzkow (2017) suggested reasons why social media has increased the amount of fake news. The first reason was the low cost of producing content, implying that fake news producers can earn more profits from small-scale, short-term strategies. Moreover, the format of social media (news feeds, especially viewed on phones) makes it difficult to consider the accuracy of content. Lastly, networks of Facebook friends are ideologically separated such as in terms of political views; Liberals and Conservatives tend to read and share content that matches their ideological standpoints (Bakshy, Messing and Adamic, 2015). Thus, people who receive

news from Facebook or other social media are not going to get any true evidence, which could go against their ideologies.

Political issues often become fake news, especially when a country has strong bias and political ideology. Political rumours are mostly long-standing and highly adverse to being corrected, sometimes bringing about dangerous consequences (Berinsky, 2015). People are likely to believe political rumours and share them if they receive the information from friends or family (Groshek and Bronda, 2016). Allcott and Gentzkow (2017) studied fake news, with special attention on the US election in 2016. They attempted to measure whether social media was an important supplier of fake news. They collected data from web traffic when users visited websites, either by directly typing URLs into browsers or by indirectly being referred from other sites, e.g. clicking links from Facebook news feeds or search engines. The web traffic sources were from Alexa.com from late October until late November and were about the 2016 US presidential election. Additionally, the process of collecting data was via browser extensions installed on people's computers and from measurement services offered to websites. However, they excluded data from mobile browsing and webpages viewed directly from social media websites. The results found that fake news webpages shared on social media had very high traffic, proving that social media is a provider of fake news, even though the list of fake news sites is still not finalised. They also suggested some reasons for the growth of fake news. First, the strength of media barriers of entry has dropped. It has become easy to set up websites and monetise website content through advertising platforms. Second, social media is appropriated for fake news diffusion, which has risen considerably for users. Third, trust and confidence in the mass media is declining in terms of reporting news fully, fairly and accurately, while fake news seems

to gain more attention. The last reason is bias. Political standpoints are likely to be ideologically organised, and each side will tend to believe negative information about the other.

A disaster also easily becomes a breeding ground for rumour. Hurricane Sandy represented the important use of social media, as this was the primary source of information (Antoniou and Ciaramicoli, 2013). Gupta et al. (2013) studied fake images on Twitter during Hurricane Sandy. This study contributed an in-depth analysis of tweets and found that most fake images on Twitter were from retweets, while a few users posted their own tweets containing fake images. However, Twitter users did not make the images go viral. Gupta et al. collected tweets by using streaming APIs to extract the tweets in real-time, as well as certain query parameters and posting times. They analysed what was contained in tweets, and fake image URLs and their propagation. Additionally, they examined the number of shared tweets per hour and sudden peaks, while observing the insights of Twitter users about the nature and diffusion of fake images. They concluded that Twitter users retweeted information from other users during the time of crisis, even when they were not following those users. Even though Twitter features are able to distinguish fake images from real ones effectively, users are not able to do it themselves well.

Rajdev (2015) studied social media during natural disasters, selecting the 2013 Moore Tornado and Hurricane Sandy. He organised tweets into two groups: legitimate and non-legitimate. The non-legitimate tweets were fake or spam. His analysis showed that users who posted fake tweets had a lower follower ratio. Accordingly, the number of friends of users who posted spam tweets was lower than users who posted legitimate tweets. While legitimate users follow relevant people such as friends, spammers and fake tweet

posters only aim to spread spam and fake content. This study looked further into natural disaster tweets and organised the types of hashtags that were added to them, and they were grouped into five categories: place, event, pray and place, e.g. #prayforoklahoma, pray and event, and others. While legitimate tweets contained direct hashtags such as #prayfor(place), fake and spam tweets added more general keywords as hashtags, like #Tornado, #oklahoma, etc. This more in-depth aspect of the study, attempting to categorise tweets into legitimate, fake or spam, used two approaches: flat and hierarchical classification and developing classifiers. These helped to achieve high accuracy in detecting types of tweets.

According to a health literacy report, 59% of European citizens relied on the internet for health information in 2014 (Fernández-Luque and Bau, 2015), and this led to people making decisions about their health. Many rumours have been found to be related to health issues. One of the common hoaxes is about cancer because this is a potentially deadly and complex disease which stimulates rumour activity (Difonzo et al., 2012). For example, there was a 'cancer update from Johns Hopkins' in 2004 describing that the heat from plastic containers, bottles and wraps can release dioxins which cause cancer (Johns Hopkins, 2008). Johns Hopkins Bloomberg School rejected this as a hoax and they insisted that they would never publish this research. Forster (2017) also said that serious health information is widely shared more than evidence-based reports. *The Independent* reported that the most shared articles on Facebook in 2016 came with the keyword 'cancer' in the headline (Forster, 2017). Difonzo et al. (2012) studied cancer rumours. They found that belief in rumours was strong and based predominantly on trustworthiness among friends and family. In addition, rumours were based on personal beliefs, attitudes and experiences, while expert knowledge was not a consideration. They

also grouped rumours into four types: dread, wish, primary control statements and secondary control statements. Dread rumours referred to negative outcomes – warning people about things that cause cancer, e.g. using a microwave to reheat food. Wish rumours, though, were about positive outcomes – recommending activities that protect against cancer, e.g. taking vitamin C. Primary control statements were concerned with helping people to manage situations by suggesting or implying ways to avoid problems. Thus, ‘don’t eat red meat and you will have a lower chance of getting cancer’ was an example of this. Secondary control statements were to make sense of something or to give a reason emotionally for it that people could not avoid. For instance, ‘cancer is caused by genetics’ (ibid et al., 2012).

While vaccines have played a critical role in saving lives and helping to eradicate numerous diseases, there is an anti-vaccination movement. There are activists who manipulate information by questioning the efficacy and safety of these vaccines (Fernández-Luque and Bau, 2015). The WHO, UNICEF and the World Bank said in 2010 that rumours about vaccines can immediately destroy services by causing outbursts of disease and indefinable deaths (Fernández-Luque and Bau, 2015). The power of social networks continues and was obvious in the Ebola outbreak in terms of influencing people’s behaviour. Researchers from the British Medical Association concluded that most social media messages contained false information, and bad tweets were retweeted more than correct information.

The previous incidents and studies show that rumours exist in politics, nature, health concerns or with famous figures. These are all vulnerable issues and it could cause rapid negative impacts if many people truly believe in the rumours. Clear evidence, logical refutation and the disconfirmation of information are strategies to confront rumour

(Baxter, Barratta and Thomson, 2015). However, it is sometimes difficult to produce strong evidence and disconfirmation evidence can be changed or amended according to governmental intentions (Bernadi et al., 2012). In addition, people would rather have their beliefs confirmed than disconfirmed (Nickerson, 1998). People tend to pursue, interpret or recall information which confirms their beliefs (ibid, 1998). Tripathy et al. (2013: 149) suggested that a means to combat rumour is to use 'trust' that individuals place on their friends. However, trust would only help to deal with rumours once it has been placed on correct and reliable sources. Effective methods of decreasing belief in false rumour would have to be collaborated in multiple ways, suggesting science-based thinking, fast debunking and putting trust in the right sources.

2.3.3 The Rumour Incident: Misinformation and Disinformation on Social Media

What is discussed above about food rumour in Thailand does not explain whether all of this is misinformation or disinformation, which is the main question. The original idea was that rumour leads to misbelief, possibly causing people to have the wrong health treatment or protection.

Berinsky (2015) defines rumour as a particular form of misinformation characterised by two features: lacking a specific standard of evidence and making it difficult to remove the spread of false information. Misinformation is normally spread by rumour and hearsay (Aldrie, 2001). Rumours can be described as an important source of misinformation, producing sticky information against correction (Cook, Ecker and Lewandowsky, 2015), and mainly spread through the media, the internet or relationships between individuals in social networks (Tripathy, Bagchi and Metha, 2010). The amount of misinformation on social media has increased due to there being

no editors and reviewers of it on websites and blogs (Cook, Ecker and Lewandowsky, 2015).

Disinformation in social media studies appears mostly on Twitter. The Twitter platform provides systematic data collection. Fung et al. (2016) analysed information from Twitter and Weibo, a Chinese microblog, about Ebola from 2014 to 2015. They retrieved data from the two platforms in two batches within 24 hours and seven days after the WHO announced the Ebola outbreak. The information was identified by manual coding and sub-datasets were selected for categorising. Fenn et al. (2014) also selected Twitter for their study because it provides an evaluation in different ways with a clear presentation format. They assessed that Twitter provides higher rates of false memory than Facebook (Fenn et al., 2014, cited in Mickes et al., 2013). Thus, they compared Twitter with non-social media conditions. In addition, Twitter conditions would provide a more realistic picture because Twitter followers do not have the same confounded interpersonal association as Facebook users. The first study provides the ideas of data collection and the coding process for my study. However, food rumours in Thailand are on Facebook. The dataset should be manually coded. Even though Facebook has the interpersonal association of mutual acquaintances, it is worth studying because it represents organic shares among people within their own connection.

Li and Sakamoto (2014) also conducted an experimental study. They were interested in the term 'collective opinion' in social media, as this can be seen in features of social media, such as 'likes' on Facebook. They questioned how collective truthfulness judgement influences the opinions among people about health-related statements. They divided six hypotheses into two themes: the adaptation of collective truthfulness and collective sharing. Each theme consisted of adapting truthfulness when the statements

were (1) debatable (2) true, false or debatable, and (3) against collective truthfulness or collective sharing. Regarding the data collection, they obtained secondary data from the Websites of Discovery, Food Networks and the National Institute of Health, and grouped the statements equally into false, true and debatable. Their participants were required to complete online experiments using Mechanical Turk (MTurk) with a seven-point of scale of true to false, with the centre of the scale meaning debatable. The participants were randomly assigned to two conditions under the statements: non-exposure and inverse. The results found that people would follow the major collective opinion if they perceived that the statement was obviously true, debatable or false. This implies that people may not seek uniqueness or go against the collective opinion. This study seemed to be interested more in the relationship between social media function and social media users and there was more engagement among users due to their methodology.

Our study on food rumour will be slightly similar in terms of applying secondary data to a web-based survey. However, Li and Sakamoto's collective opinion used health statements from non-social media sources and people were asked to think about where the statements were located in the social media space. The study of food rumour will use statements (rumours) which have actually appeared on social media. Some social media users might have been exposed to the statements. This different condition will lead to a truer idea as to whether statements can influence social media users.

Of all the previous research, Twitter has stood out more than Facebook in the selected research platform because it has a more organised format, e.g. hashtag searching. It is compatible with worldwide announcements or the spreading of news. It also matches with research issues at certain points in time, such as Ebola, SARS or natural disasters. However, Facebook research has been increasing. Most of it has been carried out

through surveys with targeted participants and by setting up time periods. Facebook has been studied in terms of its features because it is continually developing. However, this study will explore the content of rumours on Facebook by collecting the existing rumours and analysing the features of their messages. Understanding the structure of the rumour messages will help us to initially identify suspect information.

2.4 Risk Perception

The food rumours would require the explanation of risk perception. After reading the rumour message, people would perceive it differently. Schroeder (2007:1) defined risk perception as "...a person's views about risk inherent in a particular situation. Perception about food safety risk are what the individual believes would be the amount of health risk, if any, they would face from consuming a food product...". Setbon et al. (2005) found that the level of perceived risk was associated with beef consumption during the BSE crisis. There was a reduced beef consumption which one can assume that people chose to self-protect rather than trust the public measures taken to reduce it. Likewise, the various risk perceptions about BSE lead to different variations of beef consumption in United States, the Netherlands and Germany (Pennings et al., 2002)

To the dread rumour, people may be scared or worried about having food mentioned in the message, whereas the scientist would not believe it if it does not have verified references. Wish food rumours are mostly about desired food for health treatment or health protection. That unverified confirmation would be the last hope for helping with sickness. In the meantime, others would be more conscious of that information than those who are desperate. The different consumer knowledge leads to different risk perception (McCluskey and Swinnen, 2011), for example, the scientist would not rate GM food as risky as much as other people would. Food rumours rather suggest the

opposite, that people would rate the information as lower risk than the experts because the information is served as what they are looking for. It is also called “wanted risk” because they expected benefits related to that risk (Schmidt, 2004). Similarly, it is a “chosen risk” because it is the best alternative among bad choices (ibid, 2004). Overall, the hope to get over the sickness leads to the “voluntariness” to accept risk. It cannot confirm that people rate risk as high or low, just that they want to take this risk.

Although, the dread rumour will straightforwardly cause scares and worries when eating food as it claims to cause sickness or death. *Dread risk and unknown risk* are two factors influencing risk perception (Slovic, 1987). Dread risk means to be uncontrollable, involuntary and potentially provides catastrophic consequences, whilst unknown risk refers to uncertain and unobservable or giving delayed effects (McCluskey and Swinnen, 2011). For example, the food rumours would persuade patients to choose unconfirmed alternative treatment and leave their doctor (conventional treatment). The side effects of the alternative treatment would appear later. The voluntary risk then comes with unknown risk.

Poortinga and Pidgeon (2004) found that people will select information that matches with their previous belief, according to the study, showing strong bias about GM food in the UK. Indeed, initial attitudes also impact on perception of quality of information. Generally, people would pay more attention to the negative information (McCluskey and Swinnen, 2011), suggesting that it causes worries, scares, and awareness. Siegrist and Cvetkovich (2001) found that people place a high amount of trust in a health risk from the psychological experiment to the bias about negative information of health risk in food.

The source of information is essential to shape risk perception because distrust of the institution giving the information increases perception of risk (Renn, 2005). Some studies say that source credibility has highly impacted on public opinion, but others argued that it does not as much as initial attitudes (McCluskey and Swinnen, 2011). There was reported evidence that a positive relationship between risk perception and information needs, leads to an impact on information seeking behaviour (Neuwirth, Dunwoody, and Griffin 2000; Starting et al., 2004). Huurne and Gutteling (2008) replicated the study “information needs and risk perception as predictors of risk information seeking” using a questionnaire. They found that what makes the need for information is the feeling of being engaged with the topic. The judgment of risk is not based on numbers or statistics as well as incorporating affective response. They concluded that risk perception varies across time and contexts.

2.4.1 Risk perception and the media

The media is big influencer in modern societies; television, newspapers, magazines, and the Internet (Schmidt, 2004). Once the media reports risk, people would be worried, and they assume that it must be real because it is in the news. The media can both amplify or attenuate a risk topic (ibid, 2004). To date, the Internet has influenced much further through social media platforms. The source of information is more customised. While traditional media channels are not providing many channels, social media offers more sources including official channels and user-generated content. They can express their opinions on online media.

2.5 Risk Communication

Food rumours on social media create the space for senders and readers. When the rumour appears, the debunks arrive whilst it is in the public’s attention. Risk

Communication refers to “the exchange of information” about ‘health risk caused by environmental, industrial, or agricultural processes, policies or products among individuals, groups and institutions (Infanti et al., 2013). This definition shows that health risk is a real incident caused by several factors. However, the food rumour incident is disinformation, in other words, it is “the information” that causes the feeling of uncertainty about food. Even if it has not yet been proved, it will make people feel worried. Since the public perceives risk differently from others in terms of degree of control, catastrophic potential, and familiarity (Fischhoff et al.,1978; Slovic, 1987 and 2000).

Risk Communication is a setting of “public debate”, supposing to raise the level of understanding of relevant issues or actions amongst interested parties and those involved are satisfied that they will be provided with adequate information under the limits of available knowledge (National Research Council, 1989). Risk communication is also defined as a “purposeful exchange” of information about health or environmental risk between interested parties regarding; level of health and environmental risks, a significance or meaning of health or environmental risk or decision actions, or policies, including government agencies, corporations and industry groups, unions, the media, scientists, professional organizations, public interest groups and individual citizens (Covello, 1986:172). However, Plough and Krimsky (1987) argued that risk communication should include unintentional messages and other dimensions of risks, with no restrictions from any sources.

Leiss (1996:86) described risk communication as “...the flow of information and risk evaluations back and forth between academic experts, regulatory practitioners, interest

groups, and the general public...” This definition expects risk communication to be an interaction amongst related agencies.

Arguably, it cannot be expected that food rumours and its debunking will lead to a true debate or exchange of information, especially in the general public, as mentioned, that the public would probably perceive risk from the rumour more than from experts. The real debate would need to consider those who have similar backgrounds of knowledge. In addition, the experts would have deeper knowledge compared to the public. However, this does not mean that the public is incapable of joining the discussion. Instead, it stimulates the public to evaluate risk in every day issues. They can share their thoughts about it. Lofstedt (2016) concluded that risk communication is not a top-down form of communication from experts to the lay public, but it constructs dialogue among all people involved in a specific debate about risk.

Although, the social media platform would be a tool which is open for the public to show their perception towards the rumour while seeking, learning and sharing risk information (Wu, 2015). The platform helps the communication to be easier and more efficient allowing users to share or leave the message (Anderson, Rainey and Eysenbach, 2003; Bass et al., 2006). This is likely to assure that the platform provides more chances to view public perception, but does not always lead to such a debate.

Miller and Sinclair (2012) study risk perceptions in a resource community and communication implications. They stated that “...effective communication targeting resource communities requires *an understanding of risk perceptions* among residents living within these communities, which must be examined within their respective contexts...”. This assumes that designing the communication starts from understanding the way people perceive risk.

Media analysis shows that social media responds quicker to crises than traditional media (Friel and Wills, 2014). Social media is freely publishing content as there is no editorial process, meaning that the information will sometimes have mistakes because of the competition for speediness.

Regan et al. (2016) studied risk communication and social media in food safety crises. They explored whether social media lends itself to addressing characteristics and values linked to risk communication while finding what effective risk communication is. They have addressed 12 related Irish food sectors e.g. a food promotion agency, a consumer agency or a journalist conducting exploratory research using an in-depth interview. Some part of the results showed that social media can either be an extra channel, unregulated channel or channel for engagement in the risk communication. This study of food rumour will use an in-depth interview to explore the way related actors respond to the rumour. Since the food rumour issues are not only issues about food, it is also about “information” situated in social media, health concerns, especially the government’s responsibility towards it. The interviewees will include social influencers, the government sector, journalists from traditional media etc.

2.6 Food Safety

Food itself has never been completely safe since there are several pathogens causing foodborne diseases (Borcher et al., 2010). Food safety problems have occurred worldwide. The obvious example is the food safety problems in China. There have been several issues such as heavy metal pollution, pesticides, veterinary drugs and food additives (Social Science Research Council, 2014).

The United Kingdom also had crises on food safety; bovine spongiform encephalopathy (BSE) and genetically modified organisms (GMOs), affecting the confidence amongst customers to purchase the food (Yueng and Morris, 2001).

Historical food safety problems are about the rapid development; industrialisation and urbanisation (Global Food Safety Forum, 2011; Han, 2007; Nestle, 2003; Collins, 1993; Barkan, 1985; Sinclair, 1905). The population movement with the growth of specialisation of production and longer supply chains exclude consumers from producers leading to anxiety about the unknown origins of food and its safety (Social Science Research Council, 2014). In the meantime, the increased level of consumption of processed food and food eaten outside the home, brought more opportunities of bacterial and chemical contamination. Later, it comes with illegal additives and fake products (ibid, 2014). To date, food safety problems are in the attention among the public because it involves severe sickness like cancer regarding as dread risk factor (Slovic, Fischhoff, & Lichtenstein, 1979). Food safety issues overall have been around for a long time in many countries since the period of industrialisation. It shapes the direction of food production.

2.7 Food Rumour and Food Safety

Food safety emerged because of the period of industrialisation and urbanisation. The food rumour, arguably, occurred in the period after. Even though humans are still struggling with the food safety problems, we will need to prevent ourselves from the risk of disinformation. Whilst the term food safety is about things that would affect food to be harmful to people physically, the food rumour is mentally harmful, making them feel uncertain about having certain food. Food safety speaks about the actual risk, while food

rumours are somewhat a type of propaganda content that misuses “food” to attract people and “to reach” the website engagement.

Food safety could equally affect the public because most people rely on the same resources, especially those who live in urban areas. Food rumours could influence people differently according to their level of health literacy, as the expert and laypeople will perceive different levels of risk. Food safety would be an issue that affects a wider population, whilst the food rumours are more unpredictable. It would affect either a huge or a small number of people, depending on the content that links with their concerns.

2.8 Thailand Context: Food and Social media

Thailand has a long historical background regarding food. It is representative of Thai culture (Sunanta, 2005), exporting cuisine to many countries e.g. USA and the United Kingdom etc. The food industry in Thailand has contributed to 23% of the country’s GDP, being one of the largest net food exporting countries in the world (The board of Investment of Thailand, n.d.) by producing important food resources such as rice. There is one Thai proverb which describes Thailand as “There is a fish in the canal and there is rice in the field” reflecting that the country has abundant resources. There are 365 fresh food markets in the country (Department of Internal Trade, 2018). There are also several convenience stores, hypermarkets, supermarkets and department stores where people can buy food. Some stores also offer a 24-hour service. Thai people always have options where they can cook at home, eat out on a budget (street food) or at a restaurant. One can assume that the food has its high importance to Thai people’s daily life. Once there are any issues about food, it would have affected their thoughts and behaviours.

Thailand is in the top ten countries that has the most Facebook users estimated at 50 million (Clement, 2020). Charoenan (2012) found that 7 in 10 Thai online users spend time on social media everyday with 94.5% on communicating with friends and viewing the updates from them. About 63.4% is about their own shares including photos, information, or news. This shows that Thai social media users are highly engaged with the platform because Facebook has the options that serves their needs; reading, sharing and communicating. Since there are a number of users, it offers the opportunity for doing online business. Under the same platform, it is extremely competitive among the online business owners. The content that would be able to attract the user is that which is interesting, sceptical, or mysterious. The content creator would distort the message only to get the user to read and lead them to their website.

The time frame of food rumours cannot be exactly located. However, it is noticeable that the amount of rumours and food rumours is quite high during 2013-2016 in the Thai Facebook community according to the regular debunking posts from scientist lecturer's Facebook accounts, as well as the news being reported of some rumours, in the mainstream media's websites.

2.9 Social Media Influencer

Generally, social media influencers are opinion-leading people. They play a role in terms of sale and marketing. In this context, the social media influencer are the people working on food rumours. They are science experts speaking about health, science, food and other issues. Some of them are academics and doctors who are using Facebook as their main platform. They can be regarded as 'science social influencers'.

Freberg at al. (2010) defined social media influencers as "...a new type of independent third-party endorser who shapes audience attitudes through blogs, tweets and the use

of other social media...". The social media influencer can be both a hostile voice and promote brands or organisations (Gorry & Westbrook, 2009). The social influencer generally has several followers, people who have similar interests to them, such as food, lifestyle, technology, or beauty products etc. The influencer is normally a general user who has tried the products or services and later gives a consumer review. Then, they gradually earn more trust since people perceive them as a user, not a seller.

The social influencer shows their expertise through the content. Outstanding and interesting content are key to gaining higher numbers of followers and later, more reputation. In this study, the social influencer can be specified as "science influencer" since they are not quite aiming to gain more followers, but they are more concerned with sharing their expertise about science. They are arguing and proving why that information is incorrect. Unlike social media users, they are not an endorser, however, they debunk the rumours and provide evidence and explanation. This will be the social media influencer or social influencer in this study.

2.10 Social Media Research

Since this study collects data from Facebook, it is essential to provide an overview of social media research. Social media gives many opportunities to address new types of research questions. McCay-Peet and Quan-Haase (2017) proposed two angles of social media research. First, *social media use*, in terms of interaction among individuals, organisations and the government, can be questioned. This is about engagement with information and social spaces. For example, a researcher might investigate how people discuss issues about personal health on Facebook. The second angle is examining the use of social media as a tool for *academic research to understand complex problems*. This attempts to engage more scholars from other disciplines who do not exactly study social

media but can benefit from the characteristics of it. Social media can reach into demographics, behaviours, attitudes and perceptions because it is observable and extractable. It is able to examine social phenomena such as political participation or social movement. Scholars from different fields have studied social media in general, interpersonal relations and psychological wellbeing, political participation and civic engagement, and for media organisations and online journalism (Boyd and Ellison, 2007; Caers et al., 2013; Wilson, Gosling and Graham, 2012; Zhang and Leung, 2014). This statement confirms that social media can be developed to answer complex questions, as this study specifically concerns the interaction between people and many types of communicators in the areas of science and risk, not only common interactions. The study will then help to gain an understanding of disinformation and communication and trust.

Social media research has come up against many challenges. McCay-Peet and Quan-Haase (2017) proposed the types of questions that social media research has to answer. First, there are challenges with regard to methodological, ethical and scale considerations. For the methodological question, they suggested that social media allows easy access to numerous quantities of data; however, it is impossible to obtain a specific dataset. Some researchers have to pay a lot of money to purchase a full amount of data. The ethical consideration is about personal privacy, accuracy and accountability; not all users are willing to sign consent forms. The scale question concerns how the researcher integrates the different datasets and findings. Under these challenges, the data collection in this study will be in the selected time-frame, and will only be public posts as well as those that have been granted by the data sources.

Mayr and Weller (2017) suggested three basic approaches to collect social media data. The first one was using a timeframe. This is a fundamental dimension but it requires being combined with basic strategies. Common strategies are based on user accounts, topics and keywords or metadata. User accounts will be used in cases where the researcher clearly knows a target group but where it is sometimes not possible to identify everyone in that group. Topics and keywords are often used, e.g. a sport event or a general discussion on issues such as same-sex marriage. Twitter can place specific hashtags into the discussions, but other platforms will apply descriptive metadata, i.e. tags or keywords. These are used as criteria for searching and full texts of social media content, such as tweets, posts or comments, can include specific words. However, it is difficult to complete data collection using this approach. The same issues can arise in the variation in vocabulary used. For example, for the World Cup of 2014, keywords could have been 'Worldcup2014', 'Brazil2014' or 'Fifaworldcup2014'; you could also have the same meaning of vocabulary but in different languages. Lastly, metadata is anything that is not limited within locations, timeframes and language. This is based on selecting social media platforms and data accessing policies. The case of data collection is in setting up a list of German candidates' elections (Kaczmirek et al., 2014).

2.10.1 Facebook Research and Disinformation of Food in Thailand

Facebook and Twitter are two regularly studied platforms in social media research (McCay-Peet and Quan-Haase, 2017). They are social networking sites where people can express their behaviour, maintain relationships and share content and engage in online communication (Sage, 2014). Being the largest repository of human data, Facebook is obligated to the research community and society to provide access to or share insights from people, and to continue growth and utility to its users (ibid, 2014).

Facebook has recently conducted an online survey in the research community to evaluate public opinions, attitudes and behaviours (ibid, 2014).

Many researchers attempt to integrate Facebook into the form of online survey research (ibid, 2014). Nevertheless, it still has a lack of a sample frame, which has led to exploratory research using non-probability sampling methods (Bhutta, 2012). Facebook requires a combination of digital and digitised data that is currently possible in the form of its Graph API. This enables access to data for the researcher and it is also a mechanism that makes access to the 'social graph' in Facebook possible (Sage, 2014). As far as the researcher is concerned, he/she needs to know which considerations and criticisms apply to research that requires the incorporation of Facebook.

While Facebook offers a platform and opportunity to obtain large and diverse samples of respondents, its population does not represent a perfect representative sample (Kosinski et al., 2015). For example, most Facebook users are likely to be young and better educated, meaning that some groups of people might be excluded, such as those who do not have internet access or those who live in countries with Facebook prohibition. The most possible and acceptable way of recruiting participants to join a study on Facebook is snowball sampling, where people can introduce other Facebook users to participate in the study (Goodman, 1961).

Gross and Acquits (2005) studied the engagement of 4,000 users in the Facebook community of the Carnegie Mellon University (CMU), including what information they shared and the implications for their privacy. This research represented the way Facebook users present their identities and protect their privacy on the platform. Advanced search features were used to extract users' profiles and IDs. Details such as demographic information, the categories of profile images (identifiable, semi-

identifiable, joke or group) or connection with friends, etc. were examined in terms of the way users presented their information. They found that users were unlikely to be concerned about the privacy of their personal data, with not many using privacy preferences and most setting visibility to others to high. This behaviour is likely to expose users to cyber risk from third party sites. Overall, this study presents Facebook research in one dimension: exploring and analysing how users set their privacy on their accounts. As this research was conducted in 2005, while Facebook started in 2004, this implies that the participation or activity level between social media information and users is not high.

Later, Wilson et al. (2012) reviewed the results of 412 Facebook literature researches in the social sciences, and they looked at deeper aspects of the platform. The studies were categorised into five themes: descriptive analysis of users (24%), motivation for using Facebook (19%), identity presentation (12%), role of Facebook in social interaction (27%), and privacy and information disclosure (18%). This investigation showed the development of Facebook research and its continuation as a domain of social science study. However, although there seemed to be an interest in risk aspects here, this was still in the sense of users having low-level privacy settings for their information. A study by Kumpel, Karnowski and Keyling (2015) represented more engagement with Facebook and users' activities, examining the relationship between news sharing and social media from 2004 to 2014.

Thailand was ranked eighth in the world in 2017 for the number of people with social media accounts (Fredrickson, 2017), which indicates that a number of people have received social media information, as well as there being an increase in content creators. Also, Thai family culture is about children and parents mostly living together until the

children become adults or older. As a result, the relationships within each family are very close. Buddhism, the national religion of Thailand, is the basis of living for the Thai family; children are taught to treat their parents well, while the parents are viewed as 'house gods', as they give life to the child (Pinyuchon and Gray, 1997). Buddhism believes in making merit or forwarding kindness to others. Some rumours include phrases like 'Please share this; it helps others, and you are making merit to other people.' This type of phrase induces people to forward to others. Besides, food itself is an integral part of Thai culture and of Thai social relations (Walker, 1996).

The main purpose of Facebook is to connect with family and friends, with the option of sharing information. Both true and false information can circulate between people who trust each other, especially seniors who are more sensitive to health information. Communication in the Thai social media community is highly active because information is mainly consumed on smartphones that allow people to read and share easily. For the reasons of the number of social media users, the amount of content, family structure and the culture of religion and food, food rumour is a vulnerable issue among Thai people. They are concerned about any content related to food and take it seriously. This situation allows some people to create food fear by making up content on social media that can alter understandings to make people believe there is a risk in eating certain foods.

Studies about disinformation of food in Thailand are rare and they have never been categorised in academic terms. The rumours have been released and debunked. But they have never been archived. If the rumours are categorised, it would bring out the characteristics of the lies. This would help the public see the features of disinformation.

Some food rumours in Thailand are about cancer risk and treatment and these were collected from 2013 to 2016. Cancer becomes a breeding ground for rumour as it is

mysterious, and even a healthy person can become a cancer patient. Thus, food rumours to do with cancer always receive attention from people. Moreover, cancer treatment in a hospital cannot guarantee recovery. Some cancer risk rumours are about eating cockles (2016), absorbing oil tissue being bleached with sodium hydroxide and chlorine and used in food (2014), Kinder Chocolate containing cancer-causing oil (2016); tap water in Thailand containing chlorine (2015), drinking from a hot plastic bottle (2014), and meat containing coconut milk left overnight (2014). There have also been rumours concerning cancer treatment, and most methods rumoured to work have been to do with consuming something, for example, steamed mangosteen (2014), lime and soda (2016), soursop (2015), cooked sweetcorn (2016), and a fruit and vegetable juices recipe from the Thai Royal Highness Princess Chulabhorn (2016). Cancer risk rumours cause a fear of consuming certain foods, and this effects sales. Cancer treatment rumours provide alternatives and hope for cancer patients that they can recover from the disease. The drinking of soursop was in the news and included the message 'even the doctor was surprised' when explaining that one man recovered from cancer after drinking it. Following this, several cancer patients decided to leave hospital and choose this option. Drinking soursop as a cancer treatment is not a false rumour. However, people, as a result, choose to drink it without considering the side effects, which take time to appear after a certain period of drinking it. With the aim of convincing people to follow it, the cancer treatment rumour will include credibility in its message. The recipe from the Thai Royal Highness Princess Chulabhorn has considerably strong credibility in Thai society because Thai people respect the royal family.

Early research on Facebook was more about its features – sharing, engagement or the presentation of images. Social media data offers more opportunities for researchers to

address new types of questions, such as social media use and how it informs the understanding of social phenomena (MaCay-Peet and Quan-Hasse, 2018). Also, the situation of disinformation of food is obvious on the Facebook platform in Thailand. This study, then, will focus on the problem of unverified social media information, analysing disinformation in the food rumours on Facebook, and collecting the rumour messages from 2013 to 2016 to analyse their characteristics using content analysis. It is a useful platform for this study because false food rumours are spread and debunked here. The research will be designed to be compatible with user privacy in the data collection. With the privacy of users as a limitation, consent will be sought for science social influencers to obtain public posts about the rumours and debunkings.

2.11 Science Communication: General Concepts and Models

Science communication is primarily about scientists' responsibility for informing the public about scientific information. The public are then able to make their choice as to how they use it. However, it also involves developing science policies, understanding relationships between the public and the scientists, creating stories of science through the mass media and exploring how people study and engage with science (Dowson, 2013). Well-known scientific debates include GM food, anxiety over vaccinations, the use of animal research, etc. (ibid, 2013), and these issues affect people's lives. Science communication has developed its approach from telling to asking, which means the public are more involved in decisions about which types of scientific research to fund, as well as which types are too unethical, too dangerous or too scary (ibid, 2013). To learn, understand, question and critique science is essential for modern life (ibid, 2013). However, most people seem to engage with science only in a small period of time at school, which is probably not enough to help them understand and contribute to

scientific debates, even for small issues like personal healthcare or broader issues like military technology (ibid, 2013). So, science communication has a crucial role in helping people to learn about science, in understanding science issues and in having voices in debates (ibid, 2013). Fishchhoff (2013: 14033) described the definition of effective science communications as follows:

‘...Inform people about the benefits, risks and other costs of their decisions, thereby allowing them to make sound choices... The goal of science communication is not agreement, but fewer, better disagreements. If that communication affords [scientists and the public] a shared understanding of the facts, then they can focus on value issues...’

The definition has developed from informing to exchanging science information National Academies of Sciences, Engineering, and Medicine (NAS) (2016: 1–2) defined science communication as;

‘...The exchange of information and viewpoints about science to achieve a goal or objective such as fostering greater understanding of scientific methods or gaining greater insight into diverse public views and concerns about the science related to a contentious issue...’

Science communication has been envisioned as a scientist giving information to another individual, e.g. a member of Congress or the media, about a scientific topic (National Academy of Science, 2016). Most science communication tends to be more dynamic and complex involving individual groups, communicators and audiences (ibid, 2016). The barriers of science communication are considerable. For example, the way scientists understand the world is different from the way people think (ibid, 2016). Other

difficulties are that the audience may have a lack of familiarity with science, scientific findings and any issues related (ibid, 2016).

The definition from the National Academy of Science assumes that people are engaged with scientific issues. Consequently, gaining public attention about science can begin by focusing on everyday life issues such as food, weather or drugs. This is to say, science communication can be universal, beginning from simple subjects. Social media encourages a rise of communication channels but creates more non-filtered information, and the public will inevitably become exposed to it. However, experts can use social media to have closer communication with the public, which helps to correct the information. This is then a starting point to engage people in science. Even though science communication mostly focuses on major controversial issues such as GM food, rumours about food are considerable because they relate to everyday lives. Communication that verifies rumours from scientists to the public could be another solution to help people to avoid false statements. Science communication, in this context, is about the way scientists talk to the public. Thus, it can improve public science knowledge by tailoring the communication to match the audience.

Science communication in this study considers the way related stakeholders, experts and academics communicate on food rumours on social media. Burns, O'Connor and Stockmayer (2003) said that some people use the term 'science communication' in a similar way to public awareness of science, public understanding of science, scientific culture or scientific literacy. They argued that science communication does not encourage scientists to talk about their work and it is not a discipline of communicators (ibid, 2003). They explained science communication is based on several compositions of

foundation terms (ibid, 2008: 184–187). Below is a list of foundations and some explanations.

1. The public: every person in society, including scientists, mediators, decision-makers, the attentive public and the interested public.
2. The participants: the members of public who are involved directly and indirectly in science communication.
3. Outcomes and responses: an outcome is a result of some action, while a response is defined as an action, a feeling, a movement, a change, etc.
4. Science: science, in the science communication context, is deemed to include pure science, mathematics, statistics, engineering, technology, medicine and related fields.
5. Awareness: used to describe people's relationship to science.
6. Understanding: this is about understanding science's theories, laws and processes identified in the science sector, together with some appreciation of their ramifications.
7. Communication: the practice of producing and negotiating meanings, one which always takes place under specific social, cultural and political conditions (Schirato and Yell, 1997).
8. Public awareness of science: a set of positive attitudes towards science and technology that is evidenced by a series of skills and behavioural intentions (Gilbert, Stocklmayer and Gernett, 1999).
9. Public understanding of science: a wide and ill-defined area involving several different discipline perspectives (Wynne, 1992).
10. Scientific literacy: this is to engage in discourse about scientific matters, to be able to identify questions, investigate and draw evidence-based conclusions, and to make informed decisions about the environment and one's own health and wellbeing (Rennie, Goodrum and Hacking 2001).

11. Scientific culture: an integrated societal value system that appreciates and promotes sciences and widespread scientific literacy as important pursuits.

Kulczycki (2013) defined science communication in practice in two levels: individual and social. The individual level refers to scientists publishing their papers and their contact with other peers, as well as promoting science. The social level is about keeping science in function as a kind of social practice. Science communication is a part of the scientific process, the same as how collecting and analysing data is. As a result, communicating about science does not only mean conveying information about scientists' work, it is also the process of the perpetuation of science.

Science communication can be indicated by two subtypes of recipients: external communication science to non-scientists, and internal communication science between professional researchers (ibid, 2013). The first type explains and popularises academic research by publishing science texts, organising science events or creating images of science and scientists. It is regarded as external because its targets are outside the communicating group; in other words, it is communication from scientists to non-scientists. Internal communication activities are about publishing research papers, scientific blogs, and managing and using social media sites for scientists, and it is the communication of science with scientists. These two science communication types complement and interact with each other (ibid, 2013).

In the past 20 years, science communication theories have been based on the relationship between the public, scientists and governments (Metcalf, 2014). The models are mainly divided into three types: the deficit model, the dialogue model and the participation model.

2.11.1 Science Communication Models

There are four models of science communication: deficit, dialogue, lay expertise and public participation. Science communication models justify different methods of communication, roles of communicators and laypersons, and the level of engagement.

a) The Deficit Model

The two main actors in this model are scientists and the public. Surveys suggest that these two actors do not know much about each other (Miller, 1998). The term 'public understanding of science' and early surveys of scientific literacy led to the deficit model (Burns, O'Connor and Stocklmayer, 2003). It is claimed that the public have inadequate scientific knowledge, while scientists have all the required knowledge (ibid, 2003). The public may not be able to address the complexity of issues (ibid, 2003). In addition, the National Academies Press (2016) explains that the task of communication is just to provide facts for the public. The deficit model was originally discussed around the middle of the 19th century (Lewenstein, 2003). This approach describes how filling knowledge gaps makes everything better (Lewenstein, 2003).

The deficit model explains the public need for science knowledge from scientists (Bultitude, 2012). In other words, it is regarded as one-way communication. It is implied that it is communication for making decisions. Science communicators provide people with all the benefits, risks and other needs for their decisions, allowing them to make sound choices. However, they cannot guarantee agreements and choices (Fischhoff, 2012); therefore, science communication needs to begin with listening to the audience.

Although there have been attempts by scholars to increase science literacy, there are difficulties with the deficit model. Some people have shown that they can learn best when facts and theories have meaning to their lives (Bransford, 2000). For instance,

research has found that people in communities with water quality problems or even the low-educated, understand highly complicated technical information (Fessenden-Raden, Fitchen and Heath, 1987). Moreover, Lewenstein (2003) also suggested that the terms 'scientifically illiterate' or 'residual' have labelled many people because the power of relationships from those who have particular knowledge, measure and interpret others. He predicted a lack of scientific knowledge of others by counting the number of scientific courses taken. Despite the fact that there are other forms of it, knowledge can be relevant to real everyday lives (Irwin and Wynne, 1996), such as knowledge from local hunters, fishermen or family members of clergy (Lewenstein, 2003). After nearly 25 years of collecting public understandings of science and attempting to affect public knowledge, the ability of people to answer scientific factual questions has not changed (ibid, 2003). Thus, the deficit model does not reduce the problem, implying that it is not a successful approach (ibid, 2003).

In 2016, a report from the National Academies of Science, Engineering and Medicine argued that the deficit model is wrong in terms of identifying what audiences need. The model asserts that people who do not accept scientific claims participate or support policies according to scientific evidence and have a lack of scientific knowledge. However, the 2016 report explains that audiences may already understand information in the same way as scientists, but they may not agree with it for some reasons. They make decisions based on their goals, needs, knowledge, skills, values and beliefs.

The report explains that the deficit model seems to be rarely used for real-life science because of a number of reasons. First, scientific facts can be interpreted in more than one way. Effective communication requires both complexity and nuances in the way that it is understood and useful to individuals. Second, it is not always the case that science

communication is directed from scientists to audiences. Instead, it can be passed through organisations, the media or other actors which audiences select. Thus, the way people interpret information is dependent on differences in trusted sources, existing knowledge and beliefs. Third, focusing only on scientific knowledge is not enough to achieve communication goals. The deficit model is particularly insufficient when people need to make decisions or take action. If audiences fail to take action with scientific evidence, it does not necessarily mean that communication should develop or that the audiences are at fault for not knowing enough about science. Making decisions is not only based on scientific information; values and other considerations also come into the equation. Achieving effective science communication is to help people understand science in relation to decisions and recognise other factors.

The report concludes that the deficit model assumes that well-crafted scientific information can meet the needs of an audience. However, there are other various factors to consider, such as audiences, places and times, as well as thinking about what people know, want to know, understand and believe.

b) The Dialogue Model (Contextual Model)

In response to the deficit model, the dialogue model is a framework for understanding which problems exist, and how to measure and address them (Lewenstein, 2003). The dialogue approach, or the contextual model, is about the exchanging of information between scientists and the public (Bultitude, 2012) and goes a step further by locating specific scientific information and linking contexts to audiences (Secko, Amend and Friday, 2013). This model perceives that science can refer to different things according to different geographic and social locations (Donghong et al., 2008). Individuals will receive information in specific contexts which influences how

they process and respond to that information (Brossard and Lewenstein, 2010; Gerhards and Schäfer, 2010; Kahlor and Rosentahl, 2009). Theoretically, the model keeps the cooperative relationships between science and the public (Clarke, 2003; Davies, 2008; Irwin, 2009) and perceives that audiences can quickly obtain knowledge about relevant issues (Brossard and Lewenstein, 2010).

This dialogue approach refers to two-way communication, and has been referred to in terms of public debate (Callon, 1999; Pouliot, 2009); public consultation (Rowe and Frewer, 2005); second-order thinking or two-way communication about the nature of risk (Irwin, 2008); and involving scientists and the public in discussions of science (Kurath and Gisler, 2009). Palmer and Schibeci (2012) divided this model into subcategories: exchanging knowledge between scientists and exchanging repeatedly between scientists and the public.

The model acknowledges that individuals are able to process information regarding social and psychological schemes from their previous experiences, cultural contexts and personal circumstances (Lewenstein, 2003). Journalists' perspectives explain that this approach constructs messages related to particular people and pays attention to their requirements and situations (Secko, Amend and Friday, 2013). It provides practical guidance for constructing science messages based on particular contexts (Lewenstein, 2003).

However, the dialogue model has argued that audiences just conceptualise a problem in which individuals respond to information that is inappropriate to experts (Wynne, 1995). Critics say that it is just another type of deficit model, maintaining a top-down information approach and placing science above everything else (Kerr et al., 2007). Donghong et al. (2008) stated that the deficit and dialogue models share some

similarities. First, they both consider science and society as two autonomous spheres where one dominates the other (ibid, 2008). Second, only a masterclass of technique and communication enables the reconciliation and regaining of equilibrium (ibid, 2008). Moreover, both models tried to capture the scientific community because this belongs to an elite group that constitutes the science definition (Lewenstein, 2003). From the mid-1980s, there was a focus on recognising local knowledge and commitments to political inclusion and participation (ibid, 2003).

c) The Lay Expertise Model

The lay expertise model values local knowledge as scientific knowledge while seeking to empower local communities in the scientific process (Brossard and Lewenstein, 2010; Irwin, 2009). This model also aims to promote the democratisation of the scientific process and focus on communities' attitudes about science and related issues (Secko, Amend and Friday, 2013). The main sources are community members and laypeople (ibid, 2013). The first two approaches of scientific information delivery are opposite forms of communication to this model, as attempts are made here to validate local knowledge and increase the roles of local communities. The roles of scientists and experts are limited to providing background and context to reflect an emphasis on lay expertise and local knowledge (Brossard and Lewenstein, 2010). Donghong et al. (2008) suggested that this model develops active engagement of laypeople and community members in the scientific process by putting their voices and sources of information outside of science. While science literacy and the contextual model legitimise knowledge and information through the scientific process (Leach et al., 2009; Nelkin, 1995), the lay expertise model instead treats personal knowledge as its legitimising factor and does not value science knowledge over any other form of knowledge.

The approach claims that scientists are often unreasonable or even arrogant about laypeople's knowledge, and that they also fail to recognise contingencies or any essential information that is required to make real-world policy decisions (Lewenstein, 2003). The lay expertise model has argued that local knowledge is based on lives and communities, e.g. local farming (ibid, 2003). With this claim, it assumes that this knowledge would help to solve a problem as technical knowledge would (ibid, 2003). Supporters of this model argued that communication activities have to be structured by acknowledging that information, knowledge and communities need experts to face scientific and technical issues (Wynne, 1996).

Nonetheless, this model was criticised in that it privileges local knowledge as being the same as expert knowledge who prefer the modern scientific system; it is anti-science (Lewenstein, 2003). However, there is a gap between local knowledge and specialised knowledge to unite. In addition, it is still unclear how lay expertise knowledge can enhance public understanding of some specific issues. Enhancing trust from the public in a policy dispute needs well-designed collaboration plans.

d) The Public Participation Model (Public Engagement Model)

Callon (1999) explained this model as a co-production where the public is highly involved with scientists in producing important knowledge. This promotes the public to be actively engaged, with a higher level of communication in science. It attempts to develop scientific processes to be more interactive and encourages public debates on scientific issues (Secko, Amend and Friday, 2013). It also promotes active engagement and democratisation of scientific processes, like the lay expertise model, from all stakeholders (Brossard and Lewenstein, 2010), improving communication and trust among these groups, while focusing less on teaching and filling knowledge gaps (Logan,

2001). This model emerged because of the importance of social trust as an issue in policy disputes of scientific and technical agendas. The key aspect of this model is to take control of science from elite scientists and politicians and give it to public groups in a way of empowerment and political engagement (Sclove, 1995). The public participation model can be called non-traditional and not within the linear approach structure present in mainstream journalism (Secko, Amend and Friday, 2013). Emphasising democratisation and supporting public participation in scientific processes in this model is about policy issues (Brossard and Lewenstein, 2010). To succeed in public engagement, the communication should be creative and experimental with both educational and democratic functions (Tlili and Dawson, 2010: 429). In journalistic terms, this model rather focuses on the processes behind the science and the addition of a number of stakeholder viewpoints to engage audiences in diverse debate (Secko, Amend and Friday, 2013).

The approach has been called the deference model (Trench and Junker, 2001), the participatory model (Lewenstein, 2005), public participation (Rowe and Frewer, 2005), the engagement model (Wellcome Trust Map, UK, as cited in Trench, 2008), the co-production of knowledge (Pouliot, 2009), and engaging the public with scientists (Kurath and Gisler, 2009). This model has been criticised as tending to carry out actions on political issues rather than public understanding. In addition, the approach seems to focus on the process of science not substantive content and serve only a small number of individuals (Brossard and Lewenstein, 2010).

All four models produce different science communication backgrounds to achieve their goals (Secko, Amend and Friday, 2013). The deficit model values science information produced by scientists and experts, assuming that they have the power to constitute

science knowledge – the ‘top-down’ approach. Even though this model seems to be old-fashioned, it could apply in societies where there is low attention to science, encouraging people to realise the importance of scientific knowledge. To accomplish the deficit model, scientists should not communicate pure science, but rather start urging the public to take interest in science from general issues that mean something to them. Even though the deficit model is highly criticised as being one-sided communication, as well as valuing scientific experts above others (ibid, 2013), it forms a good foundation to develop science communication. If people understand what scientists communicate, the contextual model can later shed light on it because people know what to respond with. In addition, the role of audiences is increasing to be spectators who are not entirely passive (ibid, 2013).

The last two approaches, the lay expertise and public participation models, can apply in the active science society because they support science engagement. The outstanding point of these two models is that they do not value scientific knowledge more than other forms (ibid, 2013). The difference between them is that the lay expertise model aims to use sources and information not within science authorities while the public participation approach goes a step further to promote active engagement in scientific processes (ibid, 2013).

This study will apply science communication concepts and models to food rumours. However, not only one model will fit in this case, suggesting that two models can be used interchangeably: the deficit model and the contextual model. Rumours about food can be issues that engage Thai people to become interested in science, and social media can support the interaction between science and the public. In addition, scientists can debunk rumours using scientific explanations, while the public can ask experts about

them. The deficit model, in this context, is not treated as a top-down approach. Rather, scientists play roles as trusted sources who are open for wide discussion.

2.11.2 Science Communication and Social Media

Science has traditionally been communicated through mainstream media. However, the trend changed, as Brian Krueger, founder of Labspace.net, said, as social networks began in the late 90s. However, in 2004, Facebook and Myspace set a new trend in internet use (Eperen and Marincola, 2011). In social media communication, users maintain strong ties with friends and strengthen their relationships with new contacts (Ellison, Steinfield and Lampe, 2007), while searching for peer identification and a sense of group belonging within the online community (O'Leary, Wilson and Metiu, 2014).

The definition of social media encompasses internet blogs, forums, microblogs, social networking sites or media sharing (Matthew, 2011), and many social media sites stress that their content is co-created (DeAndrea, 2012). Social media also plays a role in changing science communication, as well as politics, journalism, education and other areas of human activity (Kulczycki, 2013). The process of science communication on social media affects the methods of production of scientific knowledge and the promotion of scientific publications (ibid, 2013). It is regarded as a global tool which should be intensively considered in order to understand how it influences society (ibid, 2013). Social media can be called the new media, whereas traditional media refers to television, newspapers or radio.

Science communication has been widened through the use of social media. Priem et al. (2012) conducted research about the amount of UK and US scholars on social media and found that 3% of them were active on Twitter and that the number would increase.

Scientists use social media for communicating on particular aspects of their research and science to increase engagement and science literacy (Thaler et al., 2012; Parson et al., 2013). They will also use it to facilitate and exchange knowledge among their communities; in other words, it forms an internal science communication platform (Darling et al., 2013; Priem et al., 2010). Collins, Shiftman and Rock (2016) conducted a survey on how scientists use social media for both external and internal communication. They found that over 50% of scientists used three dominant social media platforms: Twitter (88%), Facebook (82%) and LinkedIn (66%).

Weigo (2001) explained that the impact of the internet on communicating science has the potential to change the relationship of players in science communication. He proposed four reasons for this situation. First, the web allows scientists and their organisations to communicate directly to audiences. Second, it removes the restrictions of space and time; as a result, it offers an opportunity for complex, sophisticated and interconnected pieces of information. Third, the internet also combines the richness of information and the demonstration of power of broadcasting. This combination is seamless, accessible and interactive. Last, the web offers two-way communication; people can interact in one-to-one, one-to-many, many-to-one and many-to-many ways.

In terms of the use of Facebook, 88% of scientists had accounts, 75% responded that they used the platform to follow science Facebook pages and 33% were owners (or administrators) of science Facebook pages (Collins, Shiftman and Rock, 2016). However, few respondents believed that Facebook can be an effective form of science communication (ibid, 2016). It has a number of pages on care communication, such as on drink-driving, child abuse, HIV/AIDS, drug abuse and depression, and it is also used for emergency communication (Lundgen and McMakin, 2013). One respondent

suggested that Facebook is just a way to approach laypeople (Collins, Shiftman and Rock, 2016). Additionally, it creates difficulties in associating with specific references; in other words, it cannot keep track of useful comments from anti-creativity statements from trolls and anti-science dissenters (ibid, 2016). Previous studies found that while an organisation's Facebook page is suitable for interaction with the public by allowing them to ask scientist questions on a particular topic, it cannot enable discussion and there is a low chance of developing scientific literacy from it (Fauville et al., 2015). More responses about the use of Facebook in science communication insist that it is not a platform for communicating with scientific peers, but instead one for communicating science to friends, family and the public (Collins, Shiftman and Rock, 2016). Likewise, Facebook is a declining source, while Pinterest and Twitter are outstanding platforms for engagement with science (ibid, 2016). It may not be selected to share professional work because Facebook-like social media, such as ResearchGate and Academia.edu are more suitable for publishing academic information. Facebook is a platform for connecting with friends, family and acquaintances (Bik and Goldstein, 2013), and is perhaps less appropriate for communicating science or publishing scientific academic papers. It is an accessible platform, and its number of general users is rising, but this may well not apply in terms of academic science communication. Instead, it could be a platform to approach public attentions.

Although Facebook seems to be incompatible with science communication, it can support science communication in some aspects. It always connects publishers and followers, allowing straightforward feedback. The feedback will be under the posts or directly on walls, while Twitter's comments can be observed on retweets and hashtags. While the level of professionalism of Facebook in supporting the communication of

science is currently impossible to estimate, the platform allows huge numbers of words per post. Facebook, Twitter and other social media platforms have broken down the boundaries between scientists, societal elites and laypersons (Yeo et al., 2014). Yeo et al. (2014) conducted a survey on scientists' perceptions of public attitudes of controversial science, while collecting usage of social media data among scientists. Results found that Twitter appeared to have a larger proportion of scientist users compared with other social media.

Many social media researches have been carried out on various platforms. However, the number of Facebook studies on analysing content seems to be low. Rather, Twitter has become more popular to examine because its functions support collecting text via hashtags. Facebook, however, is worth studying because it reflects social processes and represents how people relate to others and share information (Wilson et al., 2012). Barata, Medeiros and Kishi (2016) suggested that communication between scientists supports the distribution of knowledge. Social networks assist and develop how scientists collaborate with one another. They studied how science communication influences journal visibility in Brazil. They suggested that social media can increase the possibility of science journals reaching non-experts, decision-makers, journalists and other readers. This indicates that science results and conclusions can be absorbed by society. They evaluated the impact of articles published in Brazilian science journals on Facebook. They selected the most accessed posts, with more than 1,000 likes, in Brazilian science journals and weekly publishing content. Each paper that was published on Facebook or blogs with accessed data registered on science journal sites were compared before and after being posted on social media. Specifically, they also compared the average number of accesses of papers received monthly after their

publication on journal websites. Results found that there was an obvious increase in accesses of papers in months when they were posted on social media compared with other months. Posts on blogs reached a higher number of people but still a smaller number if compared with communication on Facebook. This shows that Facebook has influenced increasing traffic of science knowledge.

Leiderman (2012) found that Facebook had the widest reach, while Twitter had the fastest dissemination. Although the degree of public immersion in online debates is still unclear, surveys found that the internet has become the main source of science information for laypersons when seeking consultation. Most of the scientists were Twitter users (93%) but the majority had only been on the platform for less than two years (Collins, Shiftman and Rock, 2016). Weller et al. (2011) suggested conditions for being classed as scientific tweets: including scientific content, being published by scientists and incorporating a science-related hashtag. Research, focused mainly on Twitter, employed computer algorithms to locate patterns of individuals' tweets. These provided an overview of communication trends across time and populations. However, Twitter platforms offer a limit of 140 characters per post, and scientific communication through Twitter is superficial.

There are also other reasons why scientists may not use Twitter to communicate science (Collins, Shiftman and Rock, 2016). First, 36% of respondents said they had a lack of knowledge of Twitter, or in other words, a fear of the unknown (ibid, 2016). This percentage also included those who did not understand how to use Twitter, those who could not see the point or value of it and even those not knowing where to start in using social media among academics in the classroom (Vie, 2015). Second, 28% of respondents perceived a lack of time for Twitter. Additionally, scientists responded that it was time-

consuming or a waste of time (Rowlands et al., 2011). It was said that a lack of time and clarity of clear benefits of social media plus uncertainty of it was a barrier to social media use in the workplace (Collins, Shiftman and Rock, 2016). The third reason was about time restrictions, which was cited as the biggest obstacle to reaching out for scientists (Andrews et al., 2005). Other negative suggestions were that Twitter is silly or frivolous (8%), and that it lacks scientific content or is even not scientifically rigorous enough to support professional scientific debate with reference to peer reviews (3%). Rowlands et al. (2011) found that participants trusted their own ability to decide if information was trustworthy because their online networks would filter information that included various forms of authority rather than peer reviews. Fourth, the reluctance to use Twitter was about a lack of privacy (6%) (Collins, Shiftman and Rock, 2016). Fifth, 10% of respondents pointed to its lack of character or disliked its format. The rest suggested aversions to content being shared, and that it was unprofessional and aged-biased (ibid, 2016).

From the pros and cons of using Facebook and Twitter, any social media platforms can be used to communicate and publish scientific content. One is not limited to only these two platforms. Other ones can also be used to communicate science, such as Academia.edu or LinkedIn. Facebook and Twitter are, however, more popular because they start by connecting with friends. Users can design creatively what content will be in their space. Baruah (2012) confirmed that social networking sites and virtual environments are online meeting spaces where members, residents or players can show themselves and interrelate with others.

There would be less benefits to sharing scientific knowledge on a platform with low numbers of users, and scientists should select one where a high volume of people can be

reached. Facebook still ranks as the platform with the highest number of users compared with other social media, having 1,870 million active users (Chaffey, 2017). Based on the four types of the science communication model, it seems that the model has developed into having higher levels of public engagement. Accomplishing the communication requires scientists to listen to the public rather than just stating what they plan. Different levels of science knowledge of the audience should be considered a priority.

Concepts and theories of science communication may not be able to be applied practically in the Thai context. Understanding the way society represents science requires an understanding of communication culture. Science communication concepts seem to be framed by the work of scientists. Even though the communication attempts to engage the public, the process is still carried out through science publications. There are several obstacles to scientists communicating issues of science to the public (Weigo, 2001). Scientists need to be skilled in translating ideas from technical language from their discipline into accessible information for laypeople (ibid, 2001). Effective science communication increases science literacy in non-scientists (ibid, 2001). Continuing this point, effective science communication should not be limited to papers or publications. Rather, it should focus on what should be communicated and how in society.

The Thai Facebook community can be a science communication platform, and the communication within social media encourages a variety of information. If scientific knowledge was still just in journals, papers or publications, it would not catch the attention of the public. Scientists, as social media communicators, should know about this issue. Communication from experts will offer more information to slow down the trust placed in rumours.

2.12 Science Communication Research in Thailand

Science communication in Thailand gradually grew in a broad structure, and there were three previous studies of it. Additionally, it has been about establishing science organisation under the support of the United States, the negotiation of science policy and science education.

There have been some situations that reflect past science communication and represent public anxiety. In 2006, villagers found a suspicious object after rainstorms. It looked like a soft jelly that increased in size once soaked in water. However, it was assumed to be a living creature; some people thought it was a UFO (Chinnalong, 2015). This became news for a few days as it was also found in other places. However, it took several days for the Ministry of Science to take action. They held a press conference to speak to the public about the result of the investigation (ibid, 2015). The results showed that the object was a cooling gel pad used for reducing temperature by putting it on the forehead when anyone had a fever. There was no investigation from the printed media and there was slow communication from the government at that time. In 2009, there was a survey monitoring scientific content on free TV, and this content obtained 1.94% of the total TV programmes (ibid, 2015).

Saiprom (2012) investigated the relation between attitudes and science TV programmes. She compared four science TV programmes in Thailand: Wit-ta-ya-sub-pra-yut, Sponge Cha-lard-sud-sud, Wan-la-nid-vit-techno and Sci-Indy. The results found that the participants were less likely to watch science TV programmes (71%). Among those four programmes, Sponge Cha-lard-sud-sud ranked top with the most views. It is interesting that the participants preferred to watch food and health content in TV programmes, at a mean score of 3.95 from 5. The interview information revealed

that a successful science TV programme has to be close to everyday life and use common words, whilst avoiding specialised language. Thailand has great scientists, but they are interested in problems and knowledge, not communication. As a result, science communicators need to alter the language in order to deliver perfectly to the audience. On the other hand, journalists or TV hosts do not have scientific minds. Those people know how to deliver the message but not the content, while scientists know the content but not the communication methods. This causes people to not understand messages. Investing in science TV programmes requires a large budget and has a lack of support from the government. This is presumably why the amount of science TV programmes has hardly increased. This research shows these programmes are likely to be not of interest; however, all the participants were high school students, and a wider range of occupations and ages should have been studied. The author does not explore further why *Sponge Cha-lard-sud-sud* TV programme became the most popular among those four.

Even though the proportion of science TV programmes is small, there is an outstanding TV programme called 'Mega Clever'. This provides scientific content under the theme of science in our everyday lives (Homklin, 2015). There was an analysis of science content from 44 episodes of *Mega Clever*. It found that it provided various scientific content, e.g. natural sciences, biology, chemicals, nature phenomena, astronomy, health sciences, engineering and mathematics. This TV programme attempted to select messages regarding 'everyday lives' (ibid, 2015). They mainly used 'laboratory investigation' to demonstrate to the audience. They set up a studio as a scientific laboratory room or made up situations related to the questions. This would draw clear conclusions for people, while showing high reliability. They also sequenced the programme by a

scientific investigation process, including the laboratory test. However, Mega Clever always used scientific knowledge that had already been finalised, never presenting scientific debates. Homklin (2015) concluded that the communication of science carried strong barriers because it required huge understanding of the content. However, knowledge of the art of communication would be able to destroy the barriers. One of the solutions is in the design of the communication. Science knowledge, in another way, is 'heavy knowledge', requiring a deep understanding of logic and reason. The presenting of science knowledge should remove some of the details for it to become 'light knowledge', meaning it does not require high understanding. Also, it should add entertainment into the programme to match the demand of the Thai audience. However, the investigation strategy in the TV programme will elevate the light knowledge to become reliable and reasonable.

Chinnalong (2015) further worked on scientific content in printed media in three news agencies: Thairath, Matichon and Krungthepthurakij. Thairath, as discussed above, is a mass printed media and well-known in Thai society. They report issues connected to everyday life. Their scientific content has been about technology, e.g. computers, mobile phones and telecommunication, and health-related issues. More scientific content has been found in Matichon. They have a section called 'online', talking about technology, computers and information technology more than intense scientific content. Krungthepthurakij gives the highest amount of scientific content of these three printed media. They have science desks and editors, as well as offering eight pages of weekly science and technology reports.

These three printed newspapers have different characters. Thairath tends to be more sensational, aiming to have mass readers, while Matichon and Krungthepthurakij prefer

to target working class readers (Chinnalong, 2015). Over this period, this research shows that scientific content in Thailand mainly links with technology more than scientific research. However, the proportion of scientific content continues to grow by a small amount, even though it was under 5% of the overall content among these three printed media from 1996 to 2013. Scientific content in earlier Thai printed media actually only covers the surface of science aspects.

This study mentioned the famous Thai online platform called 'Pantip'. This is a Thai public WebBoard open to the public to discuss any issues. They have about 32 forums according to the public interest. One of the sections, called 'Wah-Kor', discusses science. Pantip was an online platform when social media was yet to come. Wah-Kor at Pantip has still been used by anybody interested in scientific topics. Chinnalong's research talked about science communication, referring to a long period of history. It attempts to link the framework of science communication with the Buddhist religion in Thailand. Science and Buddhism do have something in common; for example, they both believe in logical support.

Science communication in Thailand was further researched in terms of science communication methods of health issues. Kantha (2012) tested four science communication methods for the use of macrobiotic Ma-Pi food for healthcare in the Chaing-Rai province. There were four communication methods: watching six-minute videos about macrobiotics, a moderator using a PowerPoint presentation for one and a half hours, four small group workshops of one and a quarter hours each and announcements on local radio repetitively for three months. The results found that people had a better understanding of how to use macrobiotic food to support better health. Since macrobiotic food was a new issue for local people, the research selected

opinion leaders (monks) and local health volunteers to communicate to the community. They found that changing the consumption habits in local areas needed support from the leaders in that community, such as monks, teachers and village headmen or health volunteers. This group of people have to carry out the best practice and later show this to the public. Kaewthep (2000) stated that personal media (public health officers) have become the most reliable sources of information about health safety, more than other media. Senior people are more likely to accept personal media than any other types. However, this has to be skilled personal media, being expert and showing people the right practice. Workshops allow two-way communication, as well as participation and also engagement. This fits well with seniority where people do not have a good memory. Thus, revision and repetition are necessary. However, these workshops are carried out in a short period of time, which means that they have to be well-prepared with intensive money and time investment. Also, this is not repetitive (Kaewthep, 2009). The three-month announcements from the local radio were about the revision of macrobiotic food after the first three media sessions ended. The participants did not pay much attention. This may be because of urban lifestyles and the traffic that interrupted attention to the message. Overall, this research demonstrated the experiment of four science communication methods. It is not surprising that the participants had a better understanding of macrobiotic food knowledge because it was all arranged like a training session for the small targeted population, not widely obtained in other participants. This research attempted to 'customise' science communication methods to fit their participants (aged 51 to 60) and the environment in the local area. Under the short period of intensive communication and activity, there was, as a result, no wonder that the participants gained an understanding of macrobiotic foods.

The topic of macrobiotic foods, on the other hand, may not be reported by traditional media or printed media. Since the research was conducted in 2012 or before, the communication from social media was not widely used. These communication methods were not tested on participants. For example, senior people would not be comfortable to read lengthy content about macrobiotics. The most trustful personal media was paralleled to the terms of social trust, stating that people would like to trust those that they saw as 'trusted'. In this case, it was public health officers; they could influence senior people to accept the information. This is an effective way to communicate science to senior people: communicate by doing.

These three pieces of research provide an overview of science communication in Thailand. There is a growth of science institutions in Thailand issuing science policy. Science communication in traditional media in Thailand is in the form of variety shows. All the science TV programmes mentioned in the two research are no longer on-air. They obtained quite low attention from the public, while the proportion of science TV programme was low. Even though TV programmes have now turned into 'digital TV' providing 36 TV channels for the audience, the amount of science TV programmes is still low. There are three programmes called 'Science behind the Lens', 'Funny and Wonderful Science Museum' and 'Discovery Science' (DTV guide, 2019).

Three printed media outlets, Thairath, Matichon and Krungthepturakij, already have official websites. None of them have a scientific section. Krungthepturakij has an IT section, reporting on new IT issues, e.g. e-commerce, mobile phones or e-sport. They also have a health section, but mainly report on government policies and activities towards health support. Matichon also have technology and IT sections reporting the latest technology and science issues. However, the overall topics are randomly mixed together.

Thairath still has only an IT section, mainly reporting the latest technology. It seems that printed media outlets do not have extended science topics. Rather, they combine science with technology. Even though the costs of online platforms are likely to be much lower than hard-copy versions, the content from these three media outlets were not much different than in the past. It seems to be mass content that links to everyday life.

There has been an online science community WebBoard called 'Wah-Kor', where people exchange and discuss any science-related topics, and this is still open now. The platform has continued developing; they now have the option of 'tagging', allowing people to find topics of interest. The main tags are mathematics, chemicals, astronomy, technology, geology, scientists, physics, geography, mystery, science, engineering, astronauts and weapons. There are also recommended topics on the top of the WebBoard every week. Overall, past science communication from major media outlets, both on TV programmes and printed media, has not offered deep scientific knowledge because it has to be delivered to various types of people with different educational backgrounds, ages sexes, etc. In other words, it has to be 'mass' enough to get the attention of the public. Science communication can be successful once the communicator understands the character of the audience. Learning by doing is one of the effective ways to communicate science. It is able to destroy the barriers of complicated issues to communicate to laypeople. But the workshops or presentations will cost money under the short period of activity, with no repetition. Personal media is the most influential tool to communicate providing the person has a reliable position. For example, teachers, monks, heads of villages or public health officers will need to be relied upon if there is an important issue to be spoken about with the locals.

The online community at Pantip.com provides more of a discussion atmosphere and it has continued until now. This shows that science issues have not been of no interest, but they stay in a specific community.

2.13 Trust

The last key concept of this study is trust. Trust in rumours will cause misbelief and misunderstanding in the way people treat their consumption and health treatment. It can be viewed within a number of subjects, such as psychology, sociology or computer science. Trust, in the broadest terms, is defined as a willingness to make one vulnerable to another based on a judgement of similarity of intentions or values to have beneficial outcomes (Earle, Siegrist and Gutscher, 2010). It still does not have a widely accepted definition but many trust concepts are composed of three elements: integrity, dependability and competence. Integrity means that the person who can be trusted is fair. Dependability refers to people depending on the person who is trusted. Competence is that the trusted person is able to do what they say. Trust is essential in the absence of knowledge (Luhmann, 1989; Earle and Cvetkovich, 1995); it is a standing decision to give someone else the benefit of the doubt (Rahn and Transue, 1998: 543), while decreasing the cognitive complexity of complicated risks is difficult to evaluate (Priest, Bonfadelli and Rusanen, 2003: 753). When people have a lack of knowledge, they should rely on social trust to reduce the complication they are faced with (Siegrist and Cvetkovich, 2000). Besides, Siegrist et al. (2005) stated that trust is associated with a decision of the risk situation. Research has found that trust is able to shape public perceptions on a number of scientific issues (Besley and Shanahan, 2005; Brossard and Shanahan, 2003; Cobb and Macoubrie, 2004; Gutteling, Hanssen, van der Veer and Seydel, 2006; Liu and Priest, 2009; Priest, 2001; Priest et al., 2003). The German

sociologist Niklas Luhmann said that 'trust is a mechanism for the reduction of social complexity' (Dupras and Jones, 2012). It is well attached to the concept of risk (Dupras and Jones, 2012). As a result, trust is an important concept to analyse the risk of disinformation on social media, where the complexity of information occurs and spreads.

Trust in sociological terms is defined as a bet on the future contingent actions of trustees (Sherchan et al., 2013: 47:5, as cited in Dumouchel, 2005; Sztompka, 1999). In addition, sociology considers trust in terms of individuals and society (Sherchan et al., 2013). Trust at an individual level has similar perspectives to psychology in having a trustor as a major factor (Rousseau et al., 1998; Molm et al., 2000; Cook et al., 2005). This level encourages social trust to have two facets: cognitive and behavioural, as trust will build between two persons (Kollock, 1994; Lawler and Yoon, 1996). The societal level considers trust as a property of social groups represented by a collective psychological level (Sherchan et al., 2013). Trust at a societal level also expects trust from other group members (ibid et al., 2013). This level enlarges social trust to be an institutional or system aspect (ibid, 2013).

For science communication, trust and credibility are also important elements (The National Academies Press, 2016). Audiences decide which communicators and institutions are their trusted and credible sources of information, and they will use their selection to decide which information to use. Trust applies in disinformation of food on social media, and the way people trust food rumours and later, the debunking of them.

Thus, the concept of trust will represent the way people place their trust in false information and social media debunkers. Even though building trust requires credibility of information sources, food rumours still have the potential to gain trust. At this point,

it is essential to analyse the rumour message structure and other factors that encourage people to trust. In addition, people should be encouraged to be concerned about information on social media. As far as trust and social media are concerned, studies have represented trust in the social media mechanism rather than in issues appearing on social media. This section attempts to describe trust in relation to disinformation and science communication.

2.13.1 Social Media and Trust

Online communication cannot offer facial expressions of each person and it can be distracted by other issues (Cheng, Fu and Vreede, 2016). Thus, trust is a key indicator in human interactions (ibid, 2016). Chien, Cheng and Wu (2013) explained that people need to use online communication, even when there are several problems in establishing minimum levels of trust. Trust can help the problem of geographical distances of individuals by not having psychological distances (Jarvenpaa and Leidner, 1998). Building trust is therefore an important issue. In online communities, trust acts as a moderator facilitating mutual communication and can further lead to improved relationships (Jarvenpaa, Shaw and Staples, 2004; Shankar et al., 2002).

Kim and Ahmad (2013) also said that trust is important on social media sites. Earlier studies proposed that trust formation on social networks could be explored from a social context where explicit trust can support friendship while implicit trust will support contact (Trifunovic, Legendre and Anastasiades, 2010). Later, a number of studies have showed attempts to investigate trust in virtual communities. Online communication is of three types. First, there is interpersonal communication, referring to communication between two separate individuals, where information is transmitted in point-to-point interaction (Hewes, 2013). Interpersonal communication provides an approach for

individuals to achieve their needs (Cheng, Fu and Vreede, 2016). Ellison, Steinfield and Lampe (2011) said that many interpersonal communications can develop weak connections into strong ones, because sociological academics suggested that relationships between people are based on strong and weak connections. Second, there is group communication, referring to a communication behaviour group. Butler (2001) said that a group communication requires goals and the willingness to collaborate. This also helps to develop a process of information transmission and interaction, leading to a sense of group belonging (Wirtz, den Ambtman and Bloemer, 2013). Determinants for effective group communication are the perceived communication quality (Burgoon et al., 2002), communication richness (Ngwenyama and Lee, 1997), communication openness (Zimbardo, Haney, Banks and Jaffe, 1973) and communication appropriateness (Garner, 2012). Groups will have norms which regulate the behaviour of members and lead to a similarity of the individuals within the same group (Biron and Bamberger, 2012). Third, there is mass communication (Zolkepli and Kamarulzaman, 2015). This is mostly specific to media relationships rather than organisational interaction (Cheng, Fu and Vreede, 2016). Mass communication can transmit more information and reach larger numbers of users at the same time (Lingel and Naaman, 2012). These three types of communication generally appear on social media, especially the interpersonal and mass forms. Interpersonal communication should be a common type between people, such as friends, while mass communication will happen if communicators have a number of followers. However, group communication can be within a group set up on a social media platform, such as a Facebook group.

There are a number of concepts of social media and trust. Trust relationships in online social networks have three types: trust between members of networks, trust between

members and the provided online services, and trust between members and service providers (Sherchan et al., 2013). This study will concentrate on the first type because it views social media, a service provider, as a platform for users to show their trust in false information. In other words, it will look at performances of trust on social media rather than focusing on social media itself.

Social networks can be viewed as social structures made of nodes and connected by edges representing one or more interdependency (Barnes, 1954). Nodes can be individuals, groups or organisations, while connecting edges are types of relations, such as values, ideas, friendships or trade (Sherchan et al., 2013). Golbeck (2007) explained that web-based social networking, Facebook, Myspace, Twitter etc., has increased many online communities and has become a key medium of communication for both individuals and organisations. Mika (2007) suggested the concept of Friend of a Friend (FOAF) on social networks, explaining that friendship relationships are transitive.

Trust is the foundation of friendship. As a result, this implies that trust is transitive on social networks. However, some argue that trust is not transitive as one may trust someone but be unsure about his or her friends (Sherchan et al., 2013). Grabner-Krauter and Bitter (2015) suggested that web 2.0 environments and online social networks also offer places for anonymity, creating provisions of false or misleading information, and lacking or impeding verification tools not only connected with known friends. Trust can serve as a tool to reduce uncertainty and complexity of exchanges and relationships (ibid, 2015). In addition, it is able to reduce uncertainty at that time but it does not guarantee that trusted ones are right.

Disinformation in food rumours can use misleading health information on the internet as it provides people with answers to any additional questions, especially embarrassing

ones (Tonsaker, Bartlett and Trpkov, 2014). In addition, patients can share their personal health and illness experiences (ibid, 2014). However, it is hard to control the quality of online information and not all patients have good health literacy to distinguish good or bad health information. Thus, unqualified health information used in improper ways can be harmful (ibid, 2014), and patients are vulnerable to it. They may make important decisions based on sensationalised or emotional stories, which are not relevant to their health context (Winterbottom et al., 2008; Ubel et al., 2001). They tend to accept information that offers a sense of hope and control, as well as misinterpret this due to a lack of technical knowledge (Tonsaker, Bartlett and Trpkov, 2014). This then leads to a false sense of knowledge and security, and disobedience when patients build their beliefs on appropriate medical practices (ibid, 2014).

Since the internet has become a platform for the promotion of abstruse and unscientific health knowledge (ibid, 2014), the social media platform has intensively turned this into a complicated problem because it connects people already in relationships, such as friends, family or colleagues, where trust already exists. As a result, users are likely to accept misleading information shared by their friends on social media.

2.13.2 Trust in Science Communication

In terms of communication, trust refers to the generalised expectancy that messages received are true and reliable, and communicators build competence and honesty by providing accurate, objective and complete information (Ren and Levine, 1991). Trust can be composed of five parts: perceived competence, objectivity, fairness, consistency and faith (ibid, 1991). Perceived competence is the level of technical expertise related to a message source, while objectivity refers to a lack of bias in information. Fairness is to acknowledge and represent adequately all relevant points of

view. Consistency is the predictability of arguments and behaviour based on previous experience and communication efforts. Last, faith is a perception of good will in information. Not all of these five elements are needed to build trust. Trust in disinformation occurs when a message has represented good will in the information. Trust can also appear in any type of message if the receiver trusts the sender.

Weingart and Guenther (2016) explained that science communication raises questions about who the main communicators are, what their specific interests are and which media sources can be trusted. They argue that not all types of media and actors deserve the same level of trust. The main actors of science communication are the government and politicians. However, this group has hidden agendas, such as legitimacy on expenditure of technological projects, quite apart from encouraging public interest in science. Sometimes, there has been a shift to universities and research centres to communicate science. However, scientists in universities are sometimes under pressure to engage in science communication. If the motivation of communication is to gain attention from many people, scientists are not the best communicators. Science journalists have been another group of science communicator since the early 1990s. Their style of communication is about being critical observers and commentators (Fahy and Nisbet, 2011). However, the role of science journalists has changed because of the development of communication into digitisation and the rise of social media. These developments have aimed to gain ecology in the communication between science and the public. Thus, science journalists have changed (Brumfiel, 2009) to become freelancers or workers in PR departments in institutions, and they have gone far beyond conduits who provide accounts of the latest research results for the public (Brossard, 2013; Fahy and Nisbet, 2011). The last group of science communicators are social

influencers. These can be scientists, journalists or even laypersons. The credibility of social influencers has derived from their networks. They can earn trust from publishing reliable content. If their communication matches audiences' attitudes, trust will develop between them. From all the communicators over time, the most trusted people have been medical doctors, teachers, judges and scientists, while politicians and industrialists have been at the bottom of the list. Research confirming differences in placing trust came from Bickerstaff et al. (2008), drawing on a survey asking British citizens how much and whom they trusted in relation to two environmental issues: climate change and radioactive waste. The results found that the most trusted sources were university scientists and environmental organisations.

Overall, it can be assumed that some of the first science communicators were governments, PR officers of universities and science organisations counting as institutions; however, other individual actors have got in on the act, such as academic scientists, scientist journalists and bloggers. Trust in science communication is about credibility of communicators when talking about science issues. The most credible groups are academics and experts, who show much less hidden interests compared with industrialists and politicians.

2.13.3 Trust in Disinformation in the Thai Social Media Community

Some people trust misleading health information on the internet because it gives them a sense of hope. Food rumours often describe food in relation to health, life, death or sickness. Reading information on social media is different from searching for information on one's own because the provider on social media could be one of your friends or family. Thus, it is possible that social media users will believe what is shared from them.

The spread of social media has increased the amount of shared information in science communication by scholars, universities and research institutes (Weingart and Guenther, 2016). Platforms of social media, Twitter, YouTube, Facebook, etc., have had both activists and institutions in science communication, aiming for immediate participation, democratisation and two-way communication to the target audience, while having no gatekeepers and reaching all ages (ibid, 2016). Metzger et al. (2013) questioned trust on social media channels, saying there is a lack of quality control, and the sources are trusted. The credibility of the message is not affected as long as the source is known and credible. However, problems still exist because laypeople are unable to distinguish between fact and opinion from various sources, such as blogs, press releases or glossy magazines, as the intention is to make it difficult to know whether to trust them or not (ibid, 2013). In short, the contemporary media has no trusted gatekeepers who control quality, while information is blended with advertising (ibid, 2013). Thus, trust and credibility hardly appear (Weingart and Guenther, 2016). The credibility of communication and trust in the communicator are essential to connect with science when it is related to social life (ibid, 2016).

The number of social media users in Thailand has increased, currently ranking in the top ten in the world (Fredrickson, 2017). This indicates that there is a high circulation of information in the social media community. While most Thai people are on Facebook, they also use Line, an instant messaging service that can send instant free unlimited messages. Many food rumours have appeared on Line. Line contacts come from phone numbers on users' phones. This means that most of the information or disinformation sent comes from friends or family. This assumes that senders and receivers initially trust each other.

Disinformation in social media communities in Thailand propose the term of trust in different ways. This research will focus on trust in communicators and trust in disinformation. The communicator, in this study, refers to the government and non-government actors, such as scientists, doctors, experts and government agencies. Social media helps them to have well-connected communication with the public in debunking disinformation on food. As the debunking of food disinformation mostly requires scientific explanation to verify it, some scientists can help explain the truth in public posts. This can develop into 'trust' because the public will have limited knowledge to be capable of knowing the truth. They need to rely on trust in social actors and experts (Critchley, 2008; Kohring and Matthes, 2007). The quicker social media disinformation is circulated, the quicker the response, in the way of a debunking message, should be provided. This helps to decrease risk in consumption behaviour.

The disinformation focused on in this study is about food rumours, which are messages, random scientific claims or pseudosciences. The characteristics of these messages and words can convince people to trust them and change their consumption behaviour. For example, a message could include a sign, such as an exclamation mark (!), and use some expressive words, such as 'Urgent!', 'Please forward to your loved ones' or 'Please avoid'. Some content uses a fake organisation claim e.g. adding WHO into the warning statement of food and health.

The content mostly gives a sense of urgency to issues around death. Vulnerable groups of people who might believe in that information could be desperate patients. Although false content seemingly cannot be verified, this does not guarantee that educated people will not become victims too, because the providers of the message can be their friends and family. Most of the time, false food messages link to mysterious diseases, especially

cancer. This indicates that trust in disinformation is ready to happen once people receive messages providing feelings of certainty and uncertainty in people's lives.

Trust will be measured in two parts by the experimental survey: rumour content and communicators. The rumour content will be selected in a questionnaire asking respondents about their trust after reading it. Meanwhile, the survey will investigate trust in the debunked version of rumours from the government and social influencers. Science communication claims that the government sector is the least trustworthy and that scientists are the most trusted sources. This claim is based on, for example, technological issues like nuclear power plants, where hidden interests are seen to exist. However, food rumours are different because the weight of confirmation from governmental health sectors is still considerable. Social media channels still reach fewer numbers of people compared with the mass media which the government uses. The level of trust among sectors will be compared from the science communication given towards food rumours.

2.14 Conclusion

The literature review represents several elements of the study: disinformation and misinformation, risk communication, risk perception, food safety, social media research, science communication concepts and researches, and trust applied to the situation of food rumours in Thailand. It starts with the concept of disinformation and misinformation. Even though these two concepts have different meanings in their purposes in communicating false information, it is hard to prove the intention of publishing food rumours. As a result, the assumption will be that these two concepts are similar in meaning in the way that they deceive people. In relation to food rumour, the literature draws on the incidents of food scandals, showing that they brought negative

effects of food consumption and that were enlarged by the media. The literature continues with risk communication and risk perception, explaining that food rumours are related to risk. People will perceive risk differently when reading the rumours due to their life background. In the meantime, food rumours have given exchanges of information about risk under the social media platform. The public can reach the experts more easily. However, the exchange of information has not yet been applied in terms of public debate as its definition of risk communication. There is a comparison between food rumours and food safety following with the context of Thailand. The clear definition of social influencer and science social influencer has been provided as it will be one of the main focuses in this study. Previous research on Facebook seems to be about the features used, the presentation of the users and images. This study, however, will look into it more deeply by collecting original food rumour messages that exist on Facebook, and conducting content analysis in order to obtain the structure of the messages. Science communication concepts and research are essential to the study because debunking and communicating about rumours is part of scientific knowledge and communication. The communication between scientists and experts and social media users has reflected new aspects of science communication, showing the close relationships between experts and the public. Science communication models will be the framework to examine what stage of science communication Thailand is at in the case of food rumour. Information of science communication activities will be derived from in-depth interviews from social influencers, the government, NGOs, media agencies and private sectors.

The final section about trust will complete the study. Since we will analyse the rumour messages and explore the actors who are responsible for rumour incidents, we will focus on trust from the public and the way they trust in rumour and in debunked messages.

This part of the study will be carried out through the experimental survey, choosing one dread and one wish rumour that have both been debunked from the government and social influencers. The experiment will investigate whether messages from the government or social influencers receive higher trust. Also, it will find out who receives higher trust once they become the source of the messages. The results from the experimental survey will reveal the type of communication that is better to communicate science to the public. The following chapters will be the empirical elements of the study using different research methods. The first question will use content analysis to analyse the rumour messages. The second question will conduct in-depth interviews with related stakeholders on food, health and the media, and the last question will be carried out by the experimental survey.

This literature provides three research questions as follows:

- 1. What are the features of food rumour content on Facebook in Thailand?*
- 2. In what ways do the food, health and other related sectors communicate on rumours and communicate science?*
- 3. In what ways do online users trust rumours and debunkers?*

Chapter 3

Food Rumour and Content Analysis

3.1 Introduction

This chapter is about the study of false food rumours on Facebook, following the first research question: 'What are the features of food rumour content on Facebook in Thailand?' To pinpoint the timeframe of the data collection, the study collected food rumour data from the year 2013 to 2016, which has previously been shown to be the time period where the number of Facebook users interestingly increased, from around 33% of online users in May 2013 (Sakawee, 2013) to 46 million users in 2016 (Ngunsuk, 2018). This is because Thai people are highly active as online users and the diffusion information diffusion has increased. Content analysis is the methodology applied to analyse the character of the food rumours. The result will lead to the main themes of the food rumour. The analysis will be extended to the link with Thai society in terms of health concerns, media literacy and the level of scientific knowledge. Further analysis will support the position that food rumour is linked with several aspects of problems in Thai society.

There is no clear evidence of when food rumours in the Thai online community began. It can be assumed, though, that the number of messages circulated has continually increased using emails and chain emails since the 1990s, the decade when the first Thai email company was established, in 1997. People started having personal email accounts and started sending emails to others. An email is a communication between two individuals or between individual and multiple receivers. Privacy is set for each email via the use of a personal password. However, email is a limited form of communication between senders and specific receivers.

The online rumour content firstly appeared in chain emails, which people could forward to others. Any consequent effects of rumours in these emails have hardly been investigated as to whether they influence people's behaviour. Sending emails can be compared to sending letters; the sender would only know whether a small amount of the receivers respond to the message, if any. Since the birth of social media, the same rumour messages have appeared. Social media can show how rumour plays out to the public. Noticeably, food scares are more obvious in social media. Although they are in social media, the rumours should have been categorised to understand their characteristics.

This study collects food rumour messages from 2013 to 2016 from science social influencers' Facebook accounts, who have debunked several rumours. The origin of the rumour messages has been retrieved from public posts. The first section discusses previous studies on types of rumour, which is also a theme in the experimental survey. The following section is the analysis and the breakdown of rumour messages. The last section is an introduction to all the interviewed sectors who relate to food and health in Thailand, providing an overview of social media channels of communication.

3.2 Characteristics of Food Rumours in the Thai Social Media Community

According to Difonzo et al. (2012) and their study, rumours can be grouped into four types: dread, wish, primary control statement and secondary control statement. Dread rumours refer to negative outcomes, warning people not to do something. Wish rumours are about positive outcomes – recommending things to people to help them stay safe. Primary control statements are ways of suggesting to people a means of avoiding problems, and secondary control statements state reasons why some issues cannot be avoided. These four types will be applied to Thai false food rumours by dividing them into two, combining dread rumours and primary control statements into one group and

wish rumours as another group. The content of dread rumours normally talks about the dangers of food and suggests avoiding it. They refer to rumours that inform people to avoid eating certain foods as they can cause sickness or death. Wish rumours are those messages that give a sense of hope to people in terms of health treatment.

3.2.1 Dread Rumours and Primary Control Statements

This group of rumours talks about the negative results of eating certain food and follows this by suggesting it should be avoided. It can be described as having five aspects. First, messages try to convince people that having particular foods can cause sickness or death. Second, the communication sometimes creates credibility by making false claims from experts, academic positions, or organisations; for example, 'a researcher from Chicago University said that...'. Third, scientific words, such as 'chemical substance', will be used in the content in order to make messages sound more complicated and important. Fourth, food rumours often mention general foods on the market, such as pork, chicken, lime, seafood, Coca-Cola, eggs or tropical fruits, being linked with contamination. Some of these foods are also sometimes claimed to be fake. Last, messages will also persuade people to spread rumours as quickly as possible to as many people as possible. Dread rumours do not need to be composed of all five parts. The intention behind them is to scare people with words, signs and sentences, whilst using credible evidence such as research papers to back the claims up.

3.2.2 Wish Rumours

Wish rumours are those which give a sense of hope to patients that they can recover by eating certain foods. These rumours normally consist of shared experiences from people claiming that they get better after eating certain foods. They offer the alternative treatment for patients. The wish rumour can cause negative consequences

because they persuade people to ignore conventional medicine, meaning that their health problems could get even worse. This form of rumour has continuously occurred in Thai society. Recently, there was a claim that one type of plant, called *Barleria prionitis* (scientific name), could be used for cancer treatment. This led to about 1,000 people going to pick the plant in the land (Khaosod, 2018a). Later, expert influencers and some doctors reported that there was no research paper about the plant claiming its success in cancer treatment. Instead, it would be toxic to the body (Khaosod, 2018b; Thairath Online, 2018).

3.3 Data Collection and Content Analysis: Food Rumour in Thailand

Food rumours have been collected from one personal Facebook account, that of Dr. Jessada Dendungboriphant. He is a science academic from Chulalongkorn University. His Facebook account has regularly debunked a lot of rumours in the period of this study; 2013-2016. Not only food rumours, but also the other types of rumour, for example, science and health issues. As it is his personal Facebook page, he uses it for personal purposes. The data collection must be done both systematically and manually to filter out irrelevant content. The Facebook platform allows a search of posts sorted by year. When considering each year, it was found that 2013-2016 was the peak time of rumour debunking, with many occurring each month. For example, some rumours that were spread in 2014 were re-debunked in 2016. This timeframe of four years is therefore suitable to study the phenomenon. However, that is not to state that there were no rumours before or after this period. More rumours are currently appearing in the year 2020.

The rumours included in the analysis are in a form of “texts” which will be coded. According to the ground theory, coding is important (Sigauke and Swansi, 2020) as it

reflects the quality of the research. There are three schools of thought within grounded theory: Classic, Straussian and Constructivist (ibid, 2020). However, there is no agreed consensus on the coding process among these three schools (Kenny and Fourie, 2014). Therefore, 'coding heuristics' would help the beginners (Sigauke and Swansi, 2020). In particular, Corbin and Strauss (2015) suggest that the choice of strategies relies on the researcher's discretion and suggest a protocol to guide the coding process for the beginners. The protocol divides the analyses into two phases: micro analysis and general analysis. The food rumour coding will be based on general analysis because the purpose of coding is to understand the overview of the rumour characteristics in general. The general analysis is 'the bird's eye view of all the data' (ibid, 2015: 10) which is truly matched with the aim of coding. It then leads to the data reduction, developed from concepts into core categories. The final stage of the protocol is 'specific heuristics' ending up at 'developing concepts and their dimensions and properties.

Glaser and Strauss (1967) set the tools for ground theory: verbatim transcripts, anonymity, development of codes, definition of codes, coding of data, describe data. This tool has been applied to the coding of food rumours. All the data collection is verbatim, but the message is not related to anonymity. The development and definition of the code as well as the coding of data was extracted and from the ground, partly developed from existing literature – the group of wish and dread rumours as the open coding (Glaser and Strauss, 1967; Strauss and Corbin, 1998). Later the code has developed into five main codes; the development of the codes is given in Table 3.3.

Larvogna and Di Ronco (2017) stated that the number of text fragments has helped in providing insights into the recurrence of a certain theme. This also appears when conducting the coding of food rumours. The similarity of the words used in the rumour

data refers to support a certain theme. The final stage of the food rumour analysis is to categorise and conceptualise the data but not in expectation of developing the theory as the food rumour is only a part of several rumours. It would be enough to establish the characteristics of rumours, and there's still a long way to go to finalise the theory.

There is neither a template nor a format for the food rumour data. Some of them were described as personal experiences while some were in the form of news, breaking news, academic reports, or long articles. There is also a combination of formats. For example, the rumour may be in the form of an article but with added academic research to make it appear more valid. The coding process and the final theme are the result of an inductive process as Oliver (2012) states that the results of grounded theory evolve the inductive motion of data collection and analysis.

Content analysis refers to gathering and analysing the content of text (Neuman, 2011). The table below shows similar and different characteristics of food rumours from 2013 to 2016. The number of rumours increased within these four years, and dread rumours occurred more than wish rumours, assuming that the aim of rumour is often to scare people. The 73 rumours will systematically be transformed to form an organised summary (Erlingsson and Brysiewicz, 2017). Some were repeatedly debunked, which shows that messages do not disappear from the internet but are recirculated.

Table 3.1: The Amount of Food Rumours in the Years from 2013 to 2016

Year	Amount of food rumours	Dread rumours	Wish rumours
2013	3	3	-
2014	14	10	4
2015	28	18	10
2016	28	18	10
Total	73	49	24

These 73 rumours have been coded and transformed to understand the body and structure. Making the messages sound highly trustworthy requires the inclusion of reliable references. If there is no clear reference, this is likely to result in feelings of fear. There will be five coding themes: the making of reliability, the use of scientific statements, caution, hope and emotional play.

3.4 Coding Process and Results

The coding process starts by looking through all the original messages of the 73 rumours found that show similar compositions. The original sentences or statements are sharpened into condensed meaning units, codes, categories and themes. Below is an example of how rumours will be coded systematically. Each rumour can fit into more than one theme. The full table with the original messages will be in Appendix A.

Table 3.2: The Coding of Rumours

No.	Condensed meaning unit	Code	Category	Theme
1	Eating prawns and vitamin C causes arsenic. Toxicity from arsenic can cause sickness and lead to death.	Sickness and death from eating prawns and vitamin C.	Sickness claims	Caution
2	Do not use water from soaking shiitake mushrooms because it becomes contaminated with carbon disulphide leading to serious sickness.	Serious sickness from shiitake mushrooms.	Sickness claims	Caution
3	My friend's daughter is addicted to crispy seaweed. She starts to have sickness. The doctor misdiagnoses. She continues eating seaweed. She has more sickness and is totally shocked. It is because of too much salt and MSG. Seaweed is full of toxins. They will remain if processed less than two hours under 1,000 degrees.	Serious sickness from crispy seaweed. It is full of toxicity.	Sickness claims Hazardous claims	Caution
4	A plastic bottle in a car is dangerous because it has a high rate of dioxin, causing breast cancer. The heat interacts with chemicals and releases hydrogen.	Serious sickness from drinking water left hot in a car – breast cancer.	Sickness claims	Caution
			Science explanation	The use of scientific statements
5	A boy is infected with HIV because of eating fruits from the seller that have been bled onto by infected factory workers. Beware of buying street foods. Please forward this message.	Serious sickness from eating fruits that have infected blood on them.	Sickness claims	Caution

No.	Condensed meaning unit	Code	Category	Theme
6	<p>5 reasons why Thailand ranks the top cancer death from my friend's father. They are about eating overnight meals, grilled meat, fried foods, and pork belly.</p> <p>Rotten meat in the stomach cause cancer. Bacteria and virus remain in the stomach</p>	Serious sickness because of eating 5 types of food	<p>Sickness claims</p> <p>The use of statistics</p> <p>The making of closed relationship</p>	<p>Caution</p> <p>The making of reliability</p>
7	<p>Eating durian and fizzy drinks causes high blood pressure and heart attacks.</p> <p>Caffeine causes high blood pressure and heart attacks.</p> <p>There is a law in Thailand prohibiting you from eating it.</p>	Serious sickness from eating durian and drinking fizzy drinks.	<p>Sickness claims</p> <p>Science explanation</p>	<p>Caution</p> <p>The use of scientific statements</p>
8	<p>Eight dangerous common foods not to eat when the stomach is empty. Otherwise it will cause sickness.</p> <p>Bananas, garlic, vegetables, milk, alcohol, sugar, tea and persimmon.</p>	Serious sickness from eating eight common foods.	Sickness claims	Caution
9	<p>China makes fake eggs, which will effect nervous systems.</p> <p>A description about what fake eggs look like.</p> <p>The lecturer from Hong Kong University explains chemicals, claiming they are used in fake eggs.</p>	Fake food in China.	<p>Hazardous claims</p> <p>Science explanation</p> <p>Science words</p> <p>Academic claims</p>	<p>Caution</p> <p>The use of scientific statements</p> <p>The making of reliability</p>

No.	Condensed meaning unit	Code	Category	Theme
10	<p>Pak-Kood has a high concentration of carcinogen, causing cancer.</p> <p>It has to boiled to decrease this substance.</p> <p>This information is not found in the Thai language.</p> <p>My brother found it.</p>	<p>Thai vegetables have the substance of carcinogen, causing cancer.</p> <p>The information was accidentally found and it is not in the Thai language.</p>	Hazardous claims	Caution
			The sounds of hidden agendas	Emotional play
11	<p>Ripened banana has a substance called TNF, which is claimed to provide high immunity.</p> <p>This refers to the research from the University of Tokyo.</p> <p>It is claimed that black spots in bananas have eight times more chance of increasing white blood cells.</p>	<p>Ripened bananas with black spots can increase immunity.</p> <p>Mentions were made about research from the University of Tokyo.</p>	Treatment claims	Hope
			Academic claims	The making of reliability
12	<p>Lychee seeds transform into medicine.</p> <p>Drink Pork Kidney soup helps passing urine comfortably.</p> <p>The doctor is surprised.</p> <p>The recipe to kidney dialysis from lychee seeds and pork kidney.</p> <p>All is the secret.</p>	<p>The magic recipe made from lychee seeds and pork kidney, claiming as it helps not to have kidney dialysis.</p>	Magic Food Formula	Hope
			Treatment Claims	Emotional plays
13	<p>200 HIV-infected people dropped their blood in canned fruit.</p> <p>The Ministry of Health removed canned fruit from the shelves.</p> <p>The Taiwanese Food and Drug Administration found it.</p>	<p>HIV-infected canned fruit.</p> <p>This was confirmed by the Taiwanese Food and Drug Administration.</p>	The sound of hidden agenda	Caution
			Institutional claims	The making of reliability

No.	Condensed meaning unit	Code	Category	Theme
14	<p>Do you know how to boil instant noodles?!</p> <p>Boiling instant noodles by putting hot water into a cup is the wrong method because the noodles will be covered with wax and become toxic.</p> <p>The correct method is to boil instant noodles.</p> <p>Please change the way this is done.</p>	<p>Hot water will combine with the wax covering the instant noodles in a cup and become toxic.</p>	Hazardous claims	Caution
			Science explanation	The use of scientific statements
			The use of exclamation signs	Emotional play
15	<p>Pure bamboo water helps to remove kidney stones and toxins from the body without seeing a doctor after drinking for one to two weeks.</p> <p>An agriculturist invented pure bamboo water, claiming it has a lot of benefits and removes stones.</p> <p>He developed it following sufficiency economy.</p> <p>The making of pure bamboo water must be done at a specific time.</p>	<p>Drinking pure bamboo water removes kidney stones and toxins.</p> <p>One does not need to see the doctor after drinking it.</p>	Treatment claims	Hope

No.	Condensed meaning unit	Code	Category	Theme
16	<p>Stop eating pork, chicken and duck for six months because pigs in farms have been infected with HIV.</p> <p>This also includes meatballs, sausages and hot dogs.</p> <p>My friend said this is urgent.</p> <p>CP company tries to hide this news.</p> <p>If you do not stop this, you will die.</p>	<p>Stop eating pork, chicken and duck, and related processed products, because pigs in farms are infected with HIV.</p> <p>This information has been hidden.</p> <p>This is urgent.</p>	<p>Hazardous claims</p> <p>Sickness claims</p> <p>The making of close relationships</p>	<p>Caution</p> <p>The making of reliability</p>
17	<p>Boiled water with chilli stalks helps diabetes treatment and kidney dialysis.</p> <p>The story of the writer's father having diabetes for over 20 years.</p> <p>The making of the formula of boiled water with chilli stalks.</p>	<p>Boiled water with chilli stalks can help diabetes and kidney dialysis and this recipe formula.</p>	<p>Treatment claims</p> <p>Magic food formula</p>	<p>Hope</p>
18	<p>Coriander can clean kidneys.</p> <p>The making of coriander drinks.</p>	<p>Coriander can clean kidneys.</p>	<p>Treatment claims</p> <p>Magic food formula</p>	<p>Hope</p>
19	<p>The list of food therapies. Drinking and eating foods to stay away from sickness.</p> <p>The list mentions all common foods.</p>	<p>The list of food therapies.</p>	<p>Treatment claims</p>	<p>Hope</p>
20	<p>A woman has a cyst. The doctor diagnoses and concludes that she eats a lot of chicken wings.</p> <p>The chicken was injected with steroids in order to accelerate its growth.</p>	<p>Chicken wings were injected with steroids, probably causing cysts among women.</p>	<p>Science explanation</p> <p>Hazardous claims</p> <p>Sickness claims</p>	<p>Caution</p> <p>The use of scientific statements</p>

No.	Condensed meaning unit	Code	Category	Theme
21	<p>Boiling pithraj leaves along with bael can cure gout and renal disease, which a man cured by himself by drinking his own boiled herbs.</p> <p>Boiling the fresh leaves helps with appetite, enhancing your body and normalising your excretory system. Indian mulberry species contain 40,000 IU of vitamin A per 100 grams and have properties that enhance eye performance, maintain cardiac workload and reduce fever in a form of nutraceutical.</p>	Pithraj leaves, along with bael, can cure gout and renal disease, and help other sickness.	Treatment claims	Hope
			Science explanation	The use of scientific statements
22	<p>Western people stop self-deceiving.</p> <p>The US Ministry of Health removes cholesterol from the list of food concerns.</p> <p>The way to eat eggs wisely, protecting from Alzheimer's.</p>	The US Ministry of Health advise on the right amount of eggs to consume, protecting against Alzheimer's.	Treatment claims	Hope
			Institutional claims	The making of reliability
23	<p>Yunic ice contains formalin to slow down its dissolving. It also combines with chlorine in the water.</p> <p>Thai people consume death. They rank first in countries of people dying from cancer.</p>	<p>Yunic ice contains formalin. Water has chlorine.</p> <p>Thai people consume death, ranking first in countries of people dying from cancer.</p>	Science words	The use of scientific statements
			The use of statistics or numbers	The making of reliability
24	<p>Shocking!!</p> <p>Soursop water can kill cancer cells, as found by the former chief executive of the Sub-District Administrative Organisation.</p> <p>His brother recommends for him to boil soursop leaves and drink three times a day. His cancer later goes back from state 4 to state 1. The doctor agrees that this is unbelievable.</p>	Drinking soursop water can kill cancer.	Treatment claims	Hope
			The use of exclamation signs	Emotional play
25	22 paired common foods that must not be eaten together. Otherwise, sickness may be caused.	22 paired common foods that must not be eaten together. Otherwise, sickness may be caused.	Sickness claims	Caution

No.	Condensed meaning unit	Code	Category	Theme
26	<p>Fake rice from China is spread into India, Indonesia and Vietnam.</p> <p>It is made from sweet potato, potato and artificial resin, causing death.</p> <p>This is also reported by The Straits Times website in Singapore.</p> <p>Minister of agriculture in Malaysia, Ismail Sabri, said that there was no report about fake rice.</p>	Fake rice made from sweet potato, potato and artificial resin, causing death.	Hazardous claims	Caution
27	Fake rice in Thailand.	Fake rice.	Hazardous claims	Caution
28	<p>Do not eat apples at this time, including Granny Smith, Enza, Gala, etc. A lot of people died because of bacteria-infected apples.</p> <p>The Ministry of Health in Malaysia and Singapore stopped importing it.</p>	<p>Stop eating apples from the USA because they are infected with bacteria. A lot of people died.</p> <p>The Ministry of Health in Malaysia and Singapore banned it.</p>	Hazardous claims	Caution
			Institutional claims	The making of reliability
29	Fake rice. It smells like plastic.	Fake rice. It smells like plastic.	Hazardous claims	Caution
30	<p>BBC News reported that a Chinese man received surgery to remove 420 kidney stones, assuming that they were because of consuming a high amount of tofu.</p> <p>Any products from soy beans, especially tofu, which contain gypsums provide too high a calcium level.</p>	Consuming high amounts of tofu can cause kidney stones, as reported by BBC News.	Sickness claims	Caution
			Institutional claims	The making of reliability
31	Do not use tap water to cook rice because it contains chlorine for killing germs, viruses or bacteria. Chlorine will destroy vitamin B and nutrition in rice.	Do not use tap water to cook rice. It will remove most of the nutrition.	Science explanation	The use of scientific statements
32	Do not eat durian with soft drinks. Some people have died and is guessed that this is because of the combination of two gases.	Eating durian with soft drinks is hazardous because it forms a combination between two gases.	Hazardous claims	Caution

No.	Condensed meaning unit	Code	Category	Theme
33	<p>Fake eggs are found in Thailand.</p> <p>The shell is not smooth and the yolk colour has faded.</p> <p>The fake eggs effect the nervous system and other parts of the body.</p>	<p>Fake eggs found in Thailand.</p> <p>Eating fake eggs will effect the nervous system and other parts of the body.</p>	Hazardous claims	Caution
			Science explanation	The use of scientific statements
34	<p>Steamed mangosteen can treat lung cancer and pulmonary emphysema, and removes phlegm in those who have allergies. Mr Suwat Sapyapraba, food chemist, was the researcher behind this formula.</p> <p>The instructions for making steam mangosteen.</p> <p>An explanation of BIM 100.</p> <p>An explanation of xanthone from mangosteen.</p>	<p>Steamed mangosteen can treat lung cancer and pulmonary emphysema, and removes phlegm.</p>	Treatment claims	Hope
			Science explanation	The use of scientific statements
			<p>Institutional claims</p> <p>Academic claims</p>	The making of reliability
35	<p>The formula for making sliced lime to treat a pterygium.</p>	<p>The formula for making sliced lime to treat a pterygium.</p>	Treatment claims	Hope

No	Condensed meaning unit	Code	Category	Theme
36	<p>Thai people are shocked!! A researcher from a food security institution from the United Kingdom said that eating rice may cause cancer.</p> <p>Andy Meharg, British professor in agricultural science and soil from the Institute for Global Food Security, Queen's University Belfast, announced that even though rice is the main food for over half of people in the world, it contains arsenic and has high levels of toxins.</p> <p>The research team discover methods of cooking rice to get rid of arsenic acid by using the technology of distilling coffee. A machine to boil coffee helps boiled water to flow gradually into the rice. The research team conclude that the distilling technology can decrease the amount of arsenic in rice.</p> <p>The European Food Safety Authority (EFSA) announced that rice contains ten times more arsenic than other foods. Telegraphs conclude that this issue is important for people who eat rice as a main dish, especially in the developing countries.</p>	<p>Thai people are shocked because research found that eating rice may cause cancer.</p> <p>This is because over a half of the food contains arsenic acid.</p> <p>A description of the researcher from the United Kingdom. The research team are working on methods to cook rice to reduce arsenic acid.</p> <p>The European Food Safety Authority (EFSA) announced that rice contains ten times more arsenic than other foods.</p> <p>More research explains arsenic.</p>	<p>Science explanation</p> <p>Institutional claims</p> <p>Academic claims</p> <p>The use of exclamation signs</p>	<p>The use of scientific statements</p> <p>The making of reliability</p> <p>Emotional play</p>
37	<p>Don't drink soda with milk!</p> <p>The acid in the soda will react with the calcium in the milk turning them into calcium carbonate, causing stomach aches and being harmful to your health.</p>	<p>Do not drink soda with milk because they will turn into calcium carbonate causing stomach aches.</p>	<p>Sickness claims</p> <p>The use of exclamation signs</p>	<p>Caution</p>

No.	Condensed meaning unit	Code	Category	Theme
38	<p>Unbelievable!</p> <p>Lemongrass and pandanus leaf tea can cure gout.</p> <p>The composition of lemongrass leaves of pandanus and water to make a drink. Drink it instead of water.</p> <p>You will no longer need any medicines. This formula is guaranteed by patients that it is really effective!</p>	<p>Unbelievable!</p> <p>Making a drink from pandanus leaves and lemongrass can cure gout.</p>	<p>Treatment Claims</p> <p>Magic Food Formula</p> <p>The use of exclamation signs</p>	<p>Hope</p> <p>Emotional play</p>
39	<p>Warning: fake rice! It is undercooked and smells like plastic, and is found in Udonthani (Thai province).</p> <p>A lot of people in Udonthani were cheated in buying fake rice from local trucks coming to sell in the village.</p> <p>The rice is later found to smell like plastic and is inedible. Please do not trust the cheating seller.</p>	<p>Fake rice found in Thailand.</p>	<p>Hazardous claims</p> <p>The use of exclamation signs</p>	<p>Caution</p>
40	<p>Ripe star fruit can cure gout.</p> <p>Blending ripe star fruit with salt, honey and boiled water.</p> <p>Drink it for six days.</p> <p>It is not hazardous because they are all natural ingredients.</p>	<p>The blending of ripe star fruit and other ingredients to cure gout.</p>	<p>Magic food formula</p> <p>Treatment claims</p>	<p>Hope</p>
41	<p>Cook Job's-tears with rice, with a portion of two units of Job's-tears per one unit of rice. Eating it every day will help to treat gout. Do not eat chicken.</p>	<p>The making of Job's-tears and rice to cure gout.</p>	<p>Magic food formula</p> <p>Treatment claims</p>	<p>Hope</p>
42	<p>My friend's sister warns us not to eat Dory fish because detergent powder is used to remove dirt from it before freezing. This is an unrevealed secret.</p>	<p>Dory fish are contaminated with detergent powder.</p> <p>This is an unrevealed secret.</p>	<p>Hazardous claims</p> <p>The sounds of hidden agendas</p>	<p>Caution</p> <p>Emotional play</p>

No.	Condensed meaning unit	Code	Category	Theme
43	<p>There are a lot of negatives of drinking cold water.</p> <p>The research found that when a person drinks cold water when they are not thirsty, this will reduce the ability of the brain suddenly. One glass of cold water is enough to reduce mind efficiency by 15%.</p> <p>The research concludes that drinking too much cold water effects the efficiency of driving or any heavy use of the brain.</p> <p>The research is carried out by Dr Peter Roger at the University of Bristol.</p>	<p>Drinking cold water will reduce mind efficiency and cause other sickness.</p> <p>This is confirmed by the research from the University of Bristol.</p>	<p>Hazardous claims</p> <p>Sickness claims</p> <p>Institutional claims</p>	<p>Caution</p> <p>The making of reliability</p>
44	<p>People bought a bean flour sheet for the Chinese Spirit Festival and found that it was fake.</p> <p>After soaking it for over three hours, the sheet was not soft. They boiled it and it smelt like rubber. They tried stretching it and it was sticky. After chewing it, it did not taste like beans or tofu.</p>	<p>A fake bean flour sheet was found. It smelt like rubber and when stretched, it was sticky.</p> <p>It did not taste like tofu.</p>	<p>Hazardous Claims</p>	<p>Caution</p>
45	<p>Every time you reheat food, the level of nitrite increases. Nitrite will become toxic to the liver and kidneys and cause cancer.</p> <p>The mother has bladder cancer.</p> <p>Overnight food is toxic in terms of any digestive sickness.</p>	<p>Reheated overnight food increases the level of nitrite.</p> <p>This is toxic in terms of any digestive sickness.</p>	<p>Hazardous claims</p> <p>Sickness claims</p>	<p>Caution</p>
46	<p>Police arrested a gang who sold fake rice.</p> <p>The gang confessed that they had combined low quality rice and sticky rice and sold it to people in many areas, such as Buriram and other provinces, for many years.</p>	<p>Fake rice was found in Thailand, but was later found to be low quality rice.</p>	<p>Hazardous claims</p>	<p>Caution</p>

No.	Condensed meaning unit	Code	Category	Theme
47	<p>Papaya leaves can cure dengue. Please share this with others!!!!</p> <p>The chief of staff taking care of HIV patients at the Ministry of Public Health was interviewed about an interesting new method of treating dengue fever.</p> <p>It is curious that Thailand has never openly spoken about this, since papaya leaves are very common in the country and dengue is a widely fatal disease here.</p> <p>Wash and mash the leaves, then filter them, and drink this for three consecutive days. Without having major disadvantage or danger, this could be considered as a good choice of therapy.</p> <p>There are more details about the benefits of papaya leaves, e.g. being anti-cancer and anti-malaria, lowering fat levels, etc.</p> <p>There is a way to make papaya leaf juices.</p>	<p>Papaya leaves can cure dengue. Please share this with others!!!!</p> <p>This seems to be a secret as it is claimed that no one in Thailand has spoken about it before, so says the chief of staff taking care of HIV patients at the Ministry of Public Health.</p> <p>It can be a good choice of therapy.</p> <p>There are more of benefits in terms of other sicknesses.</p>	<p>Magic food formula</p> <p>Institutional claims</p> <p>The use of exclamation signs</p>	<p>Hope</p> <p>The making of reliability</p>
48	<p>Do not eat ten particular snacks because they contain lead!</p> <p>This information is from a Ratchapruek poll in the Faculty of Health at Mahidol University. Examples of snacks from 40 schools in 17 areas in Bangkok were collected. They found that lead was present in some snacks and also high levels of sodium. If too many of these snacks are eaten this may cause brain aneurysms.</p>	<p>Do not eat ten particular snacks because they contain lead. This information is from a Ratchapruek poll in the Faculty of Health at Mahidol University.</p> <p>They may cause brain aneurysms.</p>	<p>Hazardous claims</p> <p>Sickness claims</p> <p>Science words</p> <p>Academic claims</p>	<p>Caution</p> <p>The use of scientific statements</p> <p>The making of reliability</p>

No	Condensed meaning unit	Code	Category	Theme
49	The most dangerous ingredient of tap water is chlorine.	Do not use tap water to cook rice because this will mean a combination of rice and heated water which may cause cancer.	Hazardous claims	Caution
	Please do not use tap water to cook rice. This is a bad practice because chlorine in heated water combined with rice may cause cancer.		Science words	The use of scientific statements
50	<p>A teacher found fake eggs, which was demonstrated through chemical interactions. The results of these were different than with real eggs. Once the shells were burnt, the real egg shells smelt normal while the fake ones smelt like chemicals.</p> <p>The teacher concluded that the eggs could have been made using chemicals.</p> <p>Overall they looked very unnatural.</p>	<p>Fake eggs were found by a teacher.</p> <p>The teacher tested them using different chemicals. The results were different than with real eggs.</p>	Hazardous claims	Caution
51	The WHO reports that Thailand is now ranked top in deaths from cancer because of five reasons: eating grilled meats, overnight coconut milk and fried bananas, Chinese donuts, overnight fried vegetables and using foam boxes.	Thailand is now ranked top in deaths from cancer because of five reasons, as reported by the WHO.	<p>Hazardous claims</p> <p>Sickness claims</p> <p>Institutional claims</p>	<p>Caution</p> <p>The making of reliability</p>
52	Drink one unit of alcohol per six bottles of soda in the morning and evening or with lunch. Acid from alcohol will kill cancer cells. The WHO keep this a secret because they want to sell medicine and chemotherapy.	Drink alcohol to kill cancer cells. The WHO keeps this information a secret.	Treatment claims	Hope
			The sounds of hidden agendas	Emotional play
53	<p>Shrimp liver (tomalley) is the cause of toxicity and disease much more than you know.</p> <p>The Freshwater Fisheries Research Centre and the development institute acknowledge its toxicity.</p> <p>Shrimp liver has a major role in filtering toxins and other pathogens from blood circulation.</p>	Shrimp liver (tomalley) is the cause of toxicity, as the Freshwater Fisheries Research Centre and the development institute acknowledge.	Hazardous claims	Caution
			Science explanation	The use of scientific statements
			Institutional claims	The making of reliability

No.	Condensed meaning unit	Code	Category	Theme
54	A doctor from Siriraj Hospital said that we should stop eating cockles (a type of shell) because they support the growth of cancer. This is prohibited for women because it can cause seed.	Stop eating cockles because they can grow cancer, and seed among women.	Hazardous claims Sickness claims The making of close relationships Institutional claims	Caution The making of reliability
55	<p>Toxicity from drinking cold water causes backaches and weakens kidneys.</p> <p>When Thai people drink cold water, their kidneys have to work hard to relieve the coldness from the body by driving the cold water to the urinary bladder before urination. Cold water increases blood viscosity and also the blood vessels themselves lose their elasticity, leading to fat and other wastes staying in the vessels, eventually causing vascular disease.</p> <p>So anyone who still regularly drinks cold water, milk, coffee, soda, juice or tea will definitely have backaches. Therefore it is good advice to avoid these to take care of yourself.</p> <p>This information is from Dr Dumrong, the personal doctor of King Bhumiphol.</p>	<p>Drinking cold water will cause a number of sicknesses, e.g. backaches, weakened kidneys, an increase in blood viscosity, etc.</p> <p>This information is from Dr Dumrong, the personal doctor of King Bhumiphol.</p>	Sickness claims Royal family claims	Caution The making of reliability

No.	Condensed meaning unit	Code	Category	Theme
56	<p>Please be cautious when eating Red Tilapia fish. The cheating merchant will inject formalin into it.</p> <p>An overload of formalin will stop kidneys from working!!</p> <p>This is a real shock because formalin injections are more hazardous than soaking.</p> <p>The deputy director of the General Department of Health said that some merchants use it to keep the seafood looking fresh.</p> <p>Once people cook it, this decreases the level of contamination. If people consume the formalin in high levels, this will effect food digestion because of formalin having high levels of acid.</p>	<p>Red Tilapia fish is injected with formalin. Some merchants use this to keep the fish fresh. An overload of formalin can stop kidneys from working.</p> <p>This will effect food digestion if people cook and consume it.</p>	<p>Hazardous claims</p> <p>Sickness claims</p> <p>Institutional claims</p>	<p>Caution</p> <p>The making of reliability</p>
57	<p>Boil seven to eight leaves of Bai Yor (Thai herbs) and eight to ten slices of dried bael fruit in water until it becomes brown like tea. Drink this for three months. Afterwards he/she will not need kidney dialysis.</p> <p>The writer tried this formula for two months because their leg was numb and swollen, and later found that their doctor surprised with the result.</p>	<p>Bai Yor leaves (Thai herbs) can help kidney disease.</p> <p>Doctors are surprised with the result.</p>	<p>Magic food formula</p> <p>Treatment claims</p>	<p>Hope</p>
58	<p>Thai people have lied that eating durian will make you fat and get diabetes.</p> <p>The Thai government does not have the budget to promote durian like western fruits. The benefits of durian are: it is an antibiotic medicine, it burns fat because of the heat from sulphur, it helps you lose weight, it helps digestion and it has a high level of anti-oxidants. We should all eat durian.</p>	<p>Durian has a lot of benefits, specifically losing weight.</p> <p>The Thai government does not have the budget to promote durian like western fruits.</p>	<p>Treatment claims</p> <p>The sounds of hidden agendas</p>	<p>Hope</p> <p>Emotional play</p>

No.	Condensed meaning unit	Code	Category	Theme
59	Stop eating rice noodles because it has been found that preservatives in them cause cancer or disability, as reported by the Thai Foundation for Consumers.	Stop eating rice noodles because it has been found that preservatives in them cause cancer or disability.	Hazardous claims	Caution
			Sickness claims	
60	Two limes with one bottle of soda – drink this in the morning and evening. Drinking it with lunch will be even better. The acid from lime directly kills cancer cells. The WHO keep this a secret because they want to sell medicine and chemotherapy for cancer patients.	Drinking lime and soda can cure cancer. The WHO keep this a secret because they want to sell medicine and chemotherapy for cancer patients.	Institutional claims	The making of reliability
			Magic food formula	Hope
61	Do not buy bananas if the tops and bottoms of them have turned green because accelerator growth chemicals will have been used.	Do not buy bananas if the tops and bottoms of them have turned green because accelerator growth chemicals will have been used.	The sounds of hidden agendas	Emotional play
			Hazardous claims	Caution
62	A merchant sells Hed-Tob (a type of popular Thai mushroom) and this is hazardous!! Once this has been left in stock, the shells become hard while its insides get black. The seller will put it into sand, spray formalin into it and leave it overnight.	The seller renews Hed-Tob (a type of popular Thai mushroom) by spraying formalin into it and leaving it overnight. It is hazardous.	The making of close relationships	The making of reliability
			Hazardous claims	Caution
63	A customer found fake grass jelly and reported it to the media. He then thought that it looked like a sponge. Once it grew, it became noodle-like. He tried eating it and was very sticky. He concluded that it tasted different compared with the one he had eaten before.	A customer found fake grass jelly and reported it to the media. It was very sticky when eaten and tasted different compared with the one he had eaten before.	Science words	The use of scientific statements
			The use of exclamation signs	Emotional play
63	A customer found fake grass jelly and reported it to the media. He then thought that it looked like a sponge. Once it grew, it became noodle-like. He tried eating it and was very sticky. He concluded that it tasted different compared with the one he had eaten before.	A customer found fake grass jelly and reported it to the media. It was very sticky when eaten and tasted different compared with the one he had eaten before.	Hazardous claims	Caution

No	Condensed meaning unit	Code	Category	Theme
64	<p>I've tried searching for it but no one has spoken about it.</p> <p>A mongosteen seed can cure knee pain.</p> <p>I tried chewing its seeds every day for seven days. I no longer feel pain in my knees.</p>	<p>Chewing mangosteen seeds helps knee pain. No one has talked about it before.</p>	Treatment claims	Hope
			The sounds of hidden agendas	Emotional play
65	<p>Leptospirosis is caused by ricefield rats, mice and wild rats. The germs in their urine can have several months of life and spread to people. These germs can penetrate the human body in two ways: through the mouth by eating or drinking contaminated food and drinks, or through wounds or damaged tissue and skin.</p> <p>People who like to drink straight from cans are also at high risk for leptospirosis because drink cans are normally vertical with the opening side being on the upside which could be contaminated by rat urine.</p>	<p>People who like to drink canned water have to be concerned about leptospirosis because the cans could be contaminated by rat urine during the rainy season where rats migrate from floods.</p>	Hazardous claims	Caution
66	<p>The toxicity from milk tea can cause paralysis!!!!</p> <p>The hazard hiding in milk tea has been revealed.</p> <p>A doctor saw a patient with weakened arms and legs, also known as paralysis. Further searching found that the cause was drinking cold or iced water.</p> <p>If anyone still regularly drinks cold water, milk, coffee, soda, juice or tea, they will definitely have a backache.</p>	<p>Drinking milk tea and other cold water can cause paralysis.</p>	Hazardous claims	Caution
			<p>Sickness claims</p> <p>The sounds of hidden agendas</p> <p>The use of exclamation signs</p>	Emotional play

No.	Condensed meaning unit	Code	Category	Theme
67	<p>Eating chicken skin and hogs can cure diabetes and obesity,</p> <p>There was research called the Framingham Study, which was conducted by the Heart Disease Institute of America in 1960. The hypothesis was that there are factors that increase heart and vascular diseases, such as cholesterol, smoking, alcohol consumption, weight, diabetes and gout. Exercise and HDL-Chol lower the risk.</p> <p>This is the beginning of the cholesterol ghost story. Animal fat had become an evil for health, creating the trend for not eating pork products and chicken skin needing to be removed.</p> <p>40 years later, in 1999, there was an international conference where a critic said</p> <p>So the references to the Framingham Study campaigning against animal fat were a quick summary and an over-interpretation. Also the study found that other factors were related with cardiovascular disease, such as not exercising, obesity, smoking and alcohol, and these were proved. But with unidentified causes, the summary only focused mainly on cholesterol.</p> <p>To be plain-spoken, if cholesterol is related to heart disease and animal fat makes you fat and develop hyperlipidemia, this will be good for the vegetable oil business. These two factors have become an overly referred to campaign, but</p>	<p>Eating chicken skin and hogs can cure</p> <p>diabetes and obesity.</p> <p>People were misled. To be plain-spoken, if cholesterol is related to heart disease and animal fat makes you fat and develop hyperlipidemia, this will be good for the vegetable oil business.</p>	<p>Treatment claims</p> <p>Academic claims</p>	<p>Hope</p> <p>The making of reliability</p>

No.	Condensed meaning unit	Code	Category	Theme
67 (2)	<p>there are no medicines to enhance exercise or smoking cessation so there is no business to promote these factors.</p> <p>And now eating pork, chicken and vegetables is going to satisfy you. The problem is that when we fall short of carbohydrates, which are the quickest way to obtain energy for our body, we will get hungry very often, and the people who think that starving is the way to lose weight will feel guilty if they eat a full course. Changing diet plans and still eating under the amount needed, some only eat salads and no meat. These people always get hungry during meals and cannot tolerate snacks and fruits, which leads to unsuccessful diet control.</p>			
68	<p>A researcher from Cornell University in the United States published a paper in the Chemical Journal Association stating that cooked sweetcorn can remove toxins in the body.</p> <p>The researcher demonstrates this by boiling the sweetcorn at 115°C in different periods of time: 10, 25 and 50 minutes. The results showed that the longer sweetcorn was boiled, the more toxicity was removed from the substance, at 22%, 44% and 53% respectively. The researcher believes that this substance can get rid of toxins from the oxidants that are hazardous in the body. Also, these oxidants can cause cataracts, Alzheimer's, heart attacks and cancer.</p>	Cooked sweetcorn can remove toxins from the body, as reported by a researcher from Cornell University, United States.	<p>Treatment claims</p> <p>Academic claims</p>	<p>Hope</p> <p>The making of reliability</p>

No.	Condensed meaning unit	Code	Category	Theme
69	<p>Boiled ginger with turmeric, water, sugar and garlic cleans smokers' lungs.</p> <p>We do not need to be afraid of this because we have the method to remove nicotine from lungs.</p> <p>This also helps to protect against lung cancer.</p>	<p>Boiled ginger with turmeric, water, sugar and garlic to cleans smokers' lungs.</p> <p>It also helps to protect against lung cancer.</p>	Magic food formula	Hope
			<p>Treatment claims</p> <p>The use of exclamation signs</p>	Emotional play
70	<p>There is a fruit and vegetable juices recipe from the Thai Royal Highness Princess Chulabhorn.</p> <p>This can cure cancer.</p> <p>At that time, my college got this recipe so she asked her cousins to drink a litre of this instead of water for two weeks.</p> <p>Doctors were so surprised and asked for the recipe.</p>	<p>There is a fruit and vegetable juices recipe from the Thai Royal Highness Princess Chulabhorn to help treat cancer.</p>	Magic food formula	Hope
			<p>Treatment claims</p> <p>Royal family claims</p>	The making of reliability
71	<p>Eating crab with yoghurt is hazardous. You must eat banana immediately. There is already a child who has died from this.</p>	<p>Eating crab with yoghurt is hazardous. You must eat banana immediately. There is already a child who has died from this.</p>	Hazardous claims	Caution
72	<p>My father and I found a parasite in prawns. I randomly picked up 30 prawns and found it in 26 of them. Before eating, please be careful. They have over 100 eggs.</p>	<p>Parasites are found in prawns.</p>	Hazardous claims	Caution
73	<p>A Chinese doctor found a five-year-old child to have cancer and concluded that cancer may come from eating certain foods. Thus, there is advice from doctors about foods which should not be eaten, e.g. instant noodles, ham and sausage, cookies, ice cream, potato chips, etc.</p>	<p>A doctor diagnosed a child as having cancer because they should not have eaten certain foods.</p>	<p>Hazardous claims</p> <p>Sickness claims</p>	Caution

3.5 Analysis

Table 3.3 shows a summary of the themes used for all 73 rumours. While five themes were set up, three of them can become single themes: caution, hope and the use of scientific statements. Emotional play and the making of reliability can become additional themes. This is because rumour content can be composed of more than one important statement to complete the message as a story. Most rumours are about giving caution to people to be aware of consuming certain foods. Caution also combines with additional themes to make its message more reliable. Rumours, as a result, at least have an emotional purpose, either positive or negative.

3.5.1 Recurrent Themes

3.5.1.1 The Making of Reliability

The reliability of messages is about making them sound trustworthy by adding references; however, these are not always confirmed as true references. Messages sometimes use statistics or numbers as evidence or investigation results.

a) Institution, Academic and Royal Family Claims

Rumour messages include sources of academics or universities to make them sound reliable. Examples are in rumour numbers 1 and 2. The first rumour uses a random mix of academics and institutions straightaway, while some messages add another paragraph about academic resources to make them more reliable. The second example is about water from soaking mushrooms becoming contaminated with carbon disulphide. The truth is that

'A researcher from Chicago University found that prawns have intense arsenic acid. If a person has prawns together with vitamin C, it will transform from As205 (non-toxic) to As203 (toxic), known as arsenic.' **Rumour 1 (18 Sep 2013)**

it has mixed up information between the news in Taiwan warning about cheap mushrooms imported from China in 2004, contaminated with sulphur dioxide and formaldehyde, and articles from Assoc .Prof. Suchada writing about carbon disulphide.

The institutional claims are similar to the academic claims, and they make rumours sound reliable. Common institutional claims come from the Ministry of the United States, the WHO or the Ministry of Health.

*'Breaking News! The **Ministry of Health** have announced that canned fruit, such as lychee, longan, truffle, rambutan, mangosteen and others, is prohibited. They have been removed from store shelves because there have been 200 HIV-infected people who have been brought into the fruit factories and have dropped blood into the canned fruit. The **Taiwanese Food and Drug Administration** found and reported it to Thailand. Please forward this message with care. Please share.'* **Rumour 13 (14 Dec 2014)**

*'...the **WHO** keeps it as a secret because they want to sell medicine and chemotherapy for cancer patients. Try doing this. It helps without taking any pills or therapy...'* **Rumour 61 (8 May 2016)**

*'**Assoc. Prof. Suchada** said that carbon disulphide is used for producing rayon fibre in industrial manufacturing. A rubbery product contains lipid-soluble properties so it is used for oil extraction to coat metal and remove rust from it. In agriculture, it used to be used for fuming seeds to prevent insects. Characteristics of carbon disulphide include a strong-smelling liquid like chloroform. Its vapour is two times more condensed than oxygen. In the normal circumstances where carbon disulphide is floating very low, people can have an increased risk of carbon disulphide inhaling.'* **Rumour 2 (20 Nov 2013)**

Thai people have a strong respect for the royal family. There were a few rumours mentioning the royal family, even though there was no confirmation of the messages and sources.

'...Fruit and vegetable juices recipe from the Thai Royal Highness Princess Chulabhorn...'
Rumour 71 (8 Sep 2016)

b) The Making of Close Relationships (Between Publishers and Readers)

Without reliable sources, rumours convey messages through being linked to the trust in close relationships with readers. Thai people call other people uncle, aunt, brother, sister or friends due to the seniority culture. A message containing a statement of relationship is likely to be trusted. There are no verified sources in the messages; however, personal references make messages sound true, as these communications claim that things happen to their members.

c) The Use of Statistics or Numbers

'My friend's sister works in a seafood factory. She warns that we should not eat Dory fish because chemicals are adopted to it before freezing. The fish will be soaked in detergent powder (phosphate) to remove dirt and then frozen. Thus, it means that we eat the fish with a full amount of detergent powder. This is an unrevealed secret.' **Rumour 43 (20 Sep 2015)**

The making of reliability would have been noticed through statistics or numbers; the sense of ranking would cause feelings of fear. Statements using numbers or statistics make messages sound like reliable sources.

'...I am going to tell you about the foods that we eat every day as my friend's father went to the conference about cancer. Now Thailand is ranked number one in death rates of cancer patients, with one per eight people dying...' **Rumour 16 (12 July 2014)**

This rumour talked about the causes of cancer. If considered critically, they mentioned about how 'the father' is 'going to the conference'; however, details of the conference are not talked about. The statement of being 'ranked number one in death rates of cancer' would make people feel scared about having high chances of serious sickness due to the consumption of grilled meat, meat left overnight, fried bananas, etc.

Rumours need to sound as if they are reliable, even though it is not true reliability. The reliability develops in various ways in the sense of them being confirmed by adding academic and institutional references, friends and family, statistics, and numbers, and even the royal family.

3.5.1.2 The Use of Scientific Statements

Many rumours consist of scientific statements that extend the gap of the 'unknown' between 'experts' and the public in terms of science knowledge. The use of specific words can confuse people, and they either avoid understanding them or are unable to. Many rumours add scientific explanations, making the statements more complicated. However, the explanations are not likely to be correct in terms of scientific logic. The statements keep repeating the word 'toxic' to increase the feelings of fear.

a) Science Explanation

An example of scientific explanation being added is below: the story of toxic seaweed. The explanation attempts to repeat that if more salt and MSG is added, the seaweed will become toxic.

'...The doctor explained that seaweed is a water plant that relies on absorbing all substances in both fresh and sea water. In other words, seaweed is full of toxic.

***If it is processed for less than two hours under 1,000 degrees, the toxins remain. And when the seaweed is in a food drying process with salt and MSG added, it will be extremely toxic. If people consume it, it will increase the toxins in their body, which causes damage to inside organs consequently...'** Rumour 03 (18 Dec 2013)*

b) Science Words

Simple science words are to do with chemicals, and the most common one used is formalin. Since formalin is normally used to preserve dead bodies, when the word is used in association with death, this can scare people easily. Formalin has been used randomly in rumours, and it is assumed that a lot of people are familiar with this chemical. Other words used are 'lead', 'chlorine', etc.

*'Please be cautious when eating Red Tilapia fish. The cheating merchant injects **formalin**. The doctor said that injected **formalin** in Red Tilapia fish is very dangerous. An overload of **formalin** stops kidneys working!'* **Rumour 57 (12 Apr 2016)**

*'I just know that yunic ice contains **formalin** to slow down its dissolving. Water also has chlorine. Every day Thai people consume death because we drink water every day. Ice has **formalin** to make it stay as cubes, and once a day at least people eat ice. No wonder that Thai people die because of cancer. We are ranked first in countries whose people die from cancer. **Rumour 24 (18 Mar 2015)***

*'...Do not eat ten snacks! Whoever loves eating snacks, please be careful – some snacks **contain lead**...' Rumour 49 (1 Feb 2016)*

3.5.1.3 Caution

Caution is found in dread rumours in order for them to make people aware of hazardous foods or sickness concerns. Hope gives an expectation of treating the sickness. The statements of caution describe sickness caused by food consumption, and hope statements will suggest alternative treatments to keep you away from the doctor.

a) Hazardous Claims

These are claims of hazards if taking in certain kinds of food. The messages will describe negative effects that will cause these hazards. The claims are also about warning people about contaminations. Possible sickness will not be mentioned directly, but instead people are left to imply the consequences if they continue to consume the food.

'Fake rice is not only just in online social news. Rather, it is now in Nan (Thai province). There is rice sold in trucks in the village. People buy it because it is cheap. Later, once the rice is cooked, it is found as fake.' **Rumour 27 (27 May 2015)**

*'...What is tomalley? Most people love tomalley which is actually liver. **The truth is shrimp liver is the cause of toxicity and disease much more than you know...**'* **Rumour 54 (24 Mar 2016)**

*'The Ministry of Health in Malaysia and Singapore stopped importing apples from the United States ten days ago. Do not eat apples at this time including Granny Smith, Enza, Gala, etc. **There are a lot of people who have died because of bacteria infection in apples.** Listeria is the name of bacteria that causes serious sickness.'* **Rumour 28 (4 June 2015)**

b) Sickness Claims

These claims are about people becoming sick if eating or continuing to eat certain foods

*'Don't drink soda with milk! Because the acid in the soda will react with the calcium in the milk, turning them into calcium carbonate, which will be left in your stomach **causing stomachaches** and be harmful to your health.'* **Rumour 37 (11 Aug 2015)**

*'...Toxicity from drinking cold water **causes backaches and weakens kidneys**. Whoever could imagine the huge negative effects from drinking cold water...'* **Rumour 55 (12 Apr 2016)**

3.5.1.4 Hope

A sense of hope is key in terms of wish rumours. These rumours often describe unbelievable results of health treatment. They attempt to advise people to put common food ingredients into medicines, claiming that this is better than going to see the doctor.

a) The Magic Food Formula

The magic food formula is about making and combining food ingredients into medicine and claiming this is a successful method of health treatment. It mostly talks about rumours of cancer treatment and kidney disease treatment or kidney stones.

*'...Two limes with one bottle of soda. Drink it in the morning and evening. If drinking at lunch this will be better. **The acid from the lime directly kills the cancer cells...**'* **Rumour 60 (8 May 2016)**

*'...Boil lemongrass and pandanus until it heats. Reduce the heat and continue boiling for 15 minutes. Do not open the lid. Leave it until it becomes cooler. Drink it instead of water for a week. **It will wash out uric in the blood which is the cause of gout. You will no longer need any medicines...**'* **Rumour 38 (28 Aug 2015)**

b) Treatment Claims

It is simplistic that if people eat or use (this) food, it will help them be better or remove the sickness.

'Hat Yai News Centre – An agriculturist from Songkla province has got an idea of making water from bamboo after testing and developing it for over three years based on Sufficiency Economy. Pure bamboo water helps remove stones and toxins from the body without seeing a doctor.' **Rumour 15 (18 Dec 2014)**

'...Ripened banana will have a substance called TNF (tumor necrosis factor) which helps fight against the abnormal cells. The riper bananas are, the more black spots they have. More black spots means higher rates of immunity...' **Rumour 11 (26 Nov 2014)**

3.5.1.5 Emotional play

Emotional play refers to statements that usually foster a mood of fear or surprise in the reader.

a) The Use of the Exclamation Sign

The use of an exclamation mark (!) can make a statement receive more attention. The sign is normally used in a sentence ordering the readers to follow the message. It makes readers feel that what they are reading is an urgent issue.

*'Eating durian with fizzy drinks is as poisonous as cobra venom. There was a 28-year-old Chinese tourist who came to travel in Thailand and ate a lot of durians followed by drinking fizzy drinks. Caffeine in the drinks suddenly caused high blood pressure and a heart attack. Thailand has a law that after eating durians, **one must not drink fizzy drinks (Coca-Cola) within eight hours!!!***
Rumour 07 (16 July 2014)

'Do not! use tap water to cook rice because it contains chlorine for killing germs, viruses or bacteria. If using tap water to cook rice, chlorine will destroy the vitamin B and most of the nutrition in rice.' **Rumour 32 (18 Jun 2015)**

b) *The Sounds of Hidden Agendas*

This content will state that it is revealing secrets. It makes people feel like they have found a long-hidden truth.

*'Pak-Kood (an edible type of fern) is the richest in carcinogen, especially the tip of the vegetable. Japan and many other countries have researched and announced that eating Pak-Kood requires it to be scalded in boiling water in order to decrease the carcinogen. However, the carcinogen still remains. It is advised that avoiding Pak-Kood is the best way. Please forward this to others for their benefits. Additional information can be found in English, Chinese, Korean and Japanese. **There is none of this information found in Thailand. My brother accidentally found it.**' Rumour 10 (17 Nov 2014)*

*'...Drink alcohol, one unit per six bottles of soda, in the morning and evening or lunch. Acid from alcohol will kill cancer cells. **The WHO keep it as a secret because they want to sell medicine and chemotherapy...**' Rumour 53 (18 Mar 2016)*

3.5.2 Further Analysis

Table 3.3: The Breakdown of Rumour Theme Used

Theme	Amount
Caution	21
Caution and The use of scientific statements	5
Caution and The making of reliability	12
Caution, The use of scientific statements and The making of reliability	3
Caution and Emotional play	3
Caution, The use of scientific statements and Emotional Play	2
Hope	8
Hope and The use of scientific statements	1
Hope and The making of reliability	6
Hope and Emotional Play	8
Hope, The use of scientific statements and The making of reliability	1
The use of scientific statements	1
The use of scientific statements and The making of reliability	1
The use of scientific statements, The making of reliability and Emotional Play	1
Total	73

Table 3.3 shows the breakdown of categories in each theme. Even though the making of reliability cannot be a single theme for one rumour, it does contain a certain amount of themes. It makes rumours become more trustworthy, especially institutional claims. These claims mentioned in the rumours sometimes truly exist; however, they also report false information. This shows the complicated character of food rumours. On the other hand, institutional claims are used mostly in western organisations, such as the US Ministry of Health, the WHO, etc. The misuse of these claims is also in the form of 'exaggerating' what research has found, as can be seen in rumour 36, which talks about how eating rice can cause cancer because the rice absorbs high amounts of the acid arsenic from the soil. This content was in the headline that said: 'Thai people will be shocked! Eating rice will cause cancer. Brown rice has more arsenic acid than white rice.' Rice is grown in alluvial plains. While it is possible that it will absorb hazardous substances from soil, the European Union always inspects the levels of arsenic in rice. The contamination level of arsenic in Thai rice is actually much lower than rice from

other countries, e.g. America. The level of arsenic in Thai rice does not exceed the EU maximum standard. The European Union does not allow arsenic in white rice to be any more than 0.20 mg/kilograms and 0.25 mg/kilograms in brown rice (British Nutrition Foundation, 2017). Thailand has .0146 mg/kilograms in brown rice and 0.126 in white rice (Nuchanart et al., 2012).

Table 3.4: The Frequency of Rumour Themes and their Categories

Theme	Amount
The making of reliability	24
Institutional claims	13
Academic claims	7
Royal family claims	2
The making of close relationships	3
The use of statistics or numbers	1
The use of scientific statements	14
Science explanation	11
Science words	4
Caution	45
Hazardous claims	35
Sickness claims	23
Hope	25
Magic food formula	11
Treatment claims	22
Emotional play	14
The use of exclamation signs	7
The sounds of hidden agendas	8

The rumours appear in various forms of message: short notices, news or personal stories. They are composed of different statements to persuade readers. It is hardly possible to finalise one single theme for each rumour. Thus, some rumours will consist of up to three themes. However, there is a need to have a main theme plus an additional theme. Overall, most of the rumours are in the caution theme, mainly to scare readers. Some rumours only in 'caution' are not given any scientific support. The messages will

be in the form of strong advice to not eat certain foods because they could cause sickness. The combination of two or three themes makes a rumour more reliable, especially with the addition of academic, institutional, and claims from the Thai royal family.

Since all types of rumour have consisted of one to three themes and categories, there is some overlap of themes and categories used. I have made a cross-tabulation between types of rumour and categories and themes in table 5. It is obvious that 'caution' only belongs to dread rumours and 'hope' is only in wish rumours. The overlapping themes and categories in the additional themes help to complete the rumours to make them look accurate.

Table 3.5 shows the summary of the use of themes and categories. There are a total of 11 categories. Some of them clearly belong to dread or wish rumours, e.g. 'hazardous claims' and 'sickness claims' to dread rumours, and 'treatment claims' and 'magic food formula' to wish rumours. The highest amount used in the overlapping categories is in 'institutional, academic and royal family claims', with 13 out of 20 used in dread rumours and seven in wish rumours, located under the theme of 'the making of reliability'. The uses of this theme in both dread and wish rumours were quite similar. There were mainly institutional and academic claims mentioned in terms of universities and the Ministry of Public Health in wish rumours. There were four out of seven wish rumours verified as being complete hoaxes, while the rest were half-true and false. A complete hoax here means claims where the content was false, with no relationship between them. The half-true and false rumours means where the existing information was exaggerated. For example, one rumour described that the US Ministry of Health removed cholesterol from the list of foods causing cancer. This first part is true. However, the content continued that the Ministry advised people aged 50 to eat six eggs per day. The use of

institutional and academic claims in wish rumours are about exaggerating existing reports or research. The institutions and academics mentioned in dread rumours were universities, food and drug administration, BBC News, the WHO, hospitals, etc. The number of complete hoaxes in dread rumours, having no relationship between contexts and institutions, was nine out of 13. The remaining four rumours were about exaggerating information. For example, the news from the Thai Foundation for Consumers warned people not to eat rice noodles because they would cause cancer and disability due to the preservatives used. However, only two out of 12 examples of rice noodles slightly exceeded the recommended levels of sodium benzoate.

Table 3.5: The Overlapping Themes and Categories

Overlapping Categories	Dread	Wish	Total
Institutional/academic/royal family claims	13	7	20
Science explanation	9	2	11
The sounds of hidden agendas	3	5	8
The use of exclamation signs	3	2	5
Overlapping Themes			
Caution (no overlap) *	46	0	46
Hope (no overlap) *	0	24	24
The use of scientific statements	13	2	15
The making of reliability	17	7	24
Emotional play	6	8	14

The number of dread rumours is higher than wish rumours; as a result, the overall proportion of themes and categories used is higher for these rumours. However, the categories of ‘the sounds of hidden agendas’ under the theme ‘emotional play’ in wish rumours is higher than in dread rumours. Wish rumours have more hidden agenda statements because they aim to convince readers by showing treatments that go beyond conventional medicine. The common statements of hidden agendas in wish rumours were ‘the doctor is surprised’, ‘the WHO keeps it secret’, ‘Thai people were lied to by the government’ and ‘I have tried searching but no one has spoken about it’. The dread

rumours had a different mood in their statements. They revealed secrets in negative ways. For example, rumours described that food is hazardous, no one knows but 'my friend's sister knows' and she wants to warn us. Another dread rumour mentioned the common Thai vegetables that have a high amount of substances leading to cancer, as found by 'my friend'. This shows that the negative secret is given in a way that induces the reader to have a closer connection with the sender/publisher and it would encourage the reader to believe in the rumour. Overall, the use of categories and themes were quite similar in the rumours. There were some connections in using them to complete the rumour stories.

The theme of this study concerns the character of food and health rumours as they come together to complete the story. However, health-related messages have been collected systematically. Wang et al. (2019) carried out a systematic review of literature relating to health misinformation (English only). With 57 relevant papers, the largest key topic concerns communicable diseases, for example, on anti-vaxxers, Zika Virus and Ebola. The second concerns chronic non-communicable diseases such as cancer. The rest of the topics are about diet or nutrition, smoking and water safety and quality (ibid, 2019). Chou (2019) mentions that 'miracle cures' have been a large part of misinformation on social media. The vaccine misinformation relates to the anti-vaccination movement. Later, the research shows that anti-vaxxers and those in online communities supporting conspiracy theories as a source of misinformation, attempt to play with emotions such as fear, anger, or sadness, even though the misinformation perpetrated by anti-vaxxers is less when compared to accurate information (Wang et al., 2019). In Thailand, there were a few reports of anti-vaxxers coming into the country, but not enough to show that there is any obvious anti-vaxxer community. It was further reported that anti-

vaccination moves in Thailand were motivated by Islamic religious belief (Chiangraitimes, 2019). This is because Islam prohibits the consumption of pork and the vaccine substances use pork as an ingredient – gelatin, making people not take the vaccine (ibid, 2019). The drama addict, the doctor and social influencer, have warned about it (Voice TV, 2017) and even though the amount of misinformation is lower, the anti-vaxxer case shows that it does create negative emotions. Even though the amount of misinformation coming from the anti-vaxxer movement is low in comparison to pro-vaccination information, it still has an impact on the people.

The Zika virus was a highlighted case study of health misinformation. The WHO has called Zika related information as rumour since there is no evidence to support some of the claims (Sommariva, 2018). “...The rumour includes three sub-categories; misleading content – inaccurately using the information to structure a topic or an individual, false connection – the mismatch between headline and content and fabricated content – completely fake material with no evidence support...” (Sommariva, 2018: 248). According to these categories, rumour in Thailand will fall into the first category. The rumours collected in the content analysis tend to be designed to be as valid as possible, at least convincing people to complete their reading of the content in order to earn higher website traffic.

The health misinformation in Wang’s study also mentions cancer in 3 papers out of 57. One piece of literature found that people are likely to trust shared cancer-related rumours when they are based on dread rather than wishful thinking (Chua and Banerjee, 2018 as cited in Wang et al., 2019). This runs in parallel to the food rumour themes in my study since one who has cancer is vulnerable to the food-related cancer rumours. However, the food rumours concerning cancer in Thailand are more wishful messages,

leading people to follow the rumoured treatment. Overall, the systematic literature study represents health misinformation globally, while the study of food rumour is more specifically focused on food-health related rumours in Thailand. The literature shows that there is a higher concern about the anti-vaccination movement, whereas this is not an obvious problem in Thailand. However, health misinformation in Thailand also reflects the real situation about health problems in society. The content is often deliberately linked to local food in order to create an attachment to the readers.

3.6 Food Rumour and the Reflection of Thai society

3.6.1 Health Concerns

All the 73 rumours have represented Thai society in some respects. First, there is health concern. 'Cancer' is second top of the most mentioned words in the rumours – about 1.07% in all texts, while the most mentioned is 'water' at 1.23%. Other repetitive words are rice (0.83%), kidney (0.43%), chicken (0.24%), banana (0.22%), fish (0.20%) and China (0.15%). There are also other words, such as food, eat, doctor, body, drinking, etc., but these words are used for connections in the statements. This shows that food rumours consist of common things in everyday lives to attract readers. The Division of Strategy and Planning Division at the Ministry of Public Health shows the statistics of causes of death in the Thai population in 2018 (Ministry of Public Health, 2018). It found that 'cancer' ranked as the leading cause of death, followed by cerebrovascular disease, pneumonia, ischaemic heart disease and land transport accidents. The mortality rates show that out of every 100,000 people, there were 120.3 people dying from cancer in 2018. The cancer mortality rate has continued to grow. It was 112.8, 117.7 and 117.6 in 2015, 2016 and 2017 respectively. It has been the top cause of death for a long time. There is no surprise that it has become a major concern among the population. Entering

the cancer treatment process costs a huge amount of money (Hfocus, 2019). The Thai government has provided a 'social security fund' for cancer patients to have free treatment (Dailynews, 2019). There are ten types of cancer included in the free treatment service, and this will continue to extend to 20 types in the future (Diawkee, 2019).

Another health problem is kidney disease. The word 'kidney' is also often mentioned in the wish rumours, suggesting alternative treatments with magic food formulas. It has been found that 8,000,000 people in Thailand have had kidney disease (Department of Mental Health, 2018). One of the causes of kidney disease has come from diabetes (Thanakitcharu et al., 2014). The government has had to spend huge amounts of money and resources on kidney disease patients. The amount of kidney disease patients has continually increased since the cost of treatment can be claimed from the social security fund provided by the government. There are also other means of treatment cost supported by state enterprise reimbursement from the National Health Security Office Fund charity organisation. However, there is also a certain amount of self-payment.

The two most mentioned sicknesses in the rumours reflect the health problems in Thailand. As there are so many patients, it is hardly possible for everyone to have treatment, although the government provides support. While the causes of cancer are various and sometimes mysterious, it can just emerge physically, by surroundings or by consumption behaviour. Kidney disease is also related to diabetes deriving from high insulin in the blood. Relatively, consumption behaviour plays a role in the cause of the sickness.

Since there is a huge amount of cancer patients, the numbers of medical experts and resources are not high enough to support them. Some patients do not want to engage in such a slow service. Alternative treatment becomes the choice for people who are not willing to see their doctor. They are vulnerable to selecting what they believe to be the easy option.

3.6.2 Connecting with Local Food

Secondly, the most mentioned elements relate to food, e.g. rice, chicken, bananas or fish, and these foods are basics easily found in the household. As rice is the main meal in Thailand, fake versions of this have been mentioned and the negative effects of eating it. Chicken is also a common ingredient in Thai meals, and has been in rumours relating to HIV infection. Frozen fish has also been mentioned in terms of toxic contamination by it having been soaked in detergent. More specifically, some rumours have pointed to local Thai food ingredients in a negative way, which are actually in demand. For example, Hed-Tob (a local Thai mushroom type) is rare because it is normally released in the rainy season. They will cost more than normal mushrooms, making a good profit for the seller. However, the rumour claimed that the mushroom was renewed by spraying formalin and is later re-sold. The reason of publishing this content is mostly unknown. However, it is partly assumed that it is about the business strategy of 'clickbait', using a strong headline that attracts online users to click and read an article on a website. The owner of the website will earn money by every single click. Clickbait is similar to the pattern of tabloid newspapers exaggerating and being dramatic (Tilbury, 2017). Another example is durian, one of the most popular Thai fruits, and the rumour of being prohibited to eat it with soft drinks because it will cause death. It has been found that the content came from Chinese social media inventing it to lie to Chinese tourists. Generally, durian always has high demand in the markets. In short, the making of food rumours uses the common

Thai food elements and connects them with dramatic stories. The business of playing with content such as this has moved from hard copy to online platforms.

3.6.3 Thailand and the Level of Science Knowledge

The third representation is about challenging science knowledge. Rumours mostly choose highly misunderstood issues, for example, HIV. They deceive readers that they should stop eating poultry for six months because pigs, ducks and chickens in a farm are infected with HIV. Another rumour talked about fruit sellers bleeding onto fruit and the buyers being infected by eating it. These are all about scientific knowledge. They challenge readers as to whether they understand the infection of HIV correctly. The truth is that the HIV virus cannot survive outside the human body. There has been a number of studies about HIV in Thailand. One of the reports concludes that none of the Thai population are able to approach the media presentation about HIV as it has been regularly reported, but it has been set as a slow release (Wongseubchart and Chuto, 1996). Everybody is able to approach knowledge about HIV through mainstream media, however, it does not confirm that everyone will approach it. The president of Thailand's HIV Infection Network said that Thai people are still scared of HIV patients and have a strong bias against them (Matichon, 2019).

3.6.4 Media Literacy and the Mood and Tone of Messages

Fourth, besides science knowledge, there is the low level of media literacy. This will be a reason why the mood and tone of a message can influence the reader. Some people with a low level of literacy can be easily led by the publisher of the content. As can be seen, dread rumours are about fear, while wish rumours will give people hope. A desperate patient would be vulnerable to wish rumours.

'...The tone of fear in the food rumours is linked to Thai history where people were less likely to be exposed to true natural disasters. Some countries, e.g. in Scandinavia, have been exposed to severe cold weather. They need to rely on science and technology to survive, while Thailand is always in a peaceful environment. This encourages them to be less believing in science but trusting in ghosts, luck and making them feel fear...'

(Srisook, Personal Communication, 20 Dec 2017)

Boonroj and Kabmala (2019) found that the media is one of the predisposing factors affecting the search for cancer treatment by alternative medicine. The media effects perception and attitudes. It has been found that a senior Thai lady drank lime and soda because she believed that it would prevent cancer. Later, she ended up in hospital. She said that she received this information from friends through a social media chat application (Thairath, 2016a). This shows the power of social media on individuals. It also shows that older people are likely to have low media literacy. Guess, Nagler and Tucker (2019) found that people aged over 65 were seven times more likely than adolescents to share fake news articles from Facebook. It is noted that this was a study on fake news about political campaigns.

Meanwhile, hope plays a role for some patients who may not be willing to receive conventional medicine due to several reasons, e.g. not wanting to wait for the service, being in a severe stage of the sickness or being unable to pay the treatment costs. They may therefore seek alternative treatment. Wish rumours are the propaganda that fits their beliefs. Irwin (2017) found that 8% of the adult population tend to believe anything that sounds believable and matches their perceptions about the heroes and villains in

politics. Wish rumours are often designed to be simple methods giving wonderful results of sickness treatment. This induces people to believe in them.

3.6.5 Thai People and Relationships with Society

Lastly, there are specific reasons for believing rumours according to relationships with Thai society. A few rumours have referred to the Thai royal family. These types of statements actually influence the audience because the royal family is an important institution in Thailand, and Thai people pay full respect to it. However, the family were not often used since there has been a strong law about misused content about the Royal Highness. The other type of relationship is about the publisher and the reader. The language used in the rumours sounds as if friends are talking to friends, e.g. 'my dad tells me' or 'my friend's sister works there'. This encourages trust in the messages. Thai people generally refer to outsiders by using family terms as if they are real cousins. For example, I will refer to senior people in the university as brothers or sisters.

3.7 Conclusion

This chapter outlines the content analysis on Thai food rumour from 2013 to 2016. All 73 rumours have been collected from social influencers' public Facebook accounts because it is only those public platforms that organise rumours by their consequences. There are 49 dread rumours and 23 wish rumours. The dread rumours refer to those that scare readers into avoiding eating certain foods as they will cause sickness. The wish rumours offer alternative treatments that give hope to those people suffering from sicknesses. They mostly advise people to eat or mix foods and later expect results to be like a magic medicine.

The coding results are divided into three main themes and two additional themes. The first main theme is caution. The main idea is to warn people not to eat certain foods,

giving sickness claims and hazardous claims. The second theme is hope, conversely giving the reader an alternative treatment in order to stay away from the doctor. The third theme is the use of scientific statements. This means that rumours are also composed of unreliable scientific statements, sometimes inaccurate. However, this makes rumours sound complex and reliable. These three can be a single theme of rumours. However, the two additional themes are also essential: the making of reliability and emotional play. The making of reliability is about adding claims from verified institutions, academics or the Thai royal family to make rumour statements sound plausible. Emotional play adds excitement, fear or surprise into the message. A lot of rumours have used exclamation marks, while wish rumours also make sounds of content that is revealing hidden health treatment secrets.

The five themes and categories have reflected the features of rumours in Thailand. Food rumours have also reflected some aspects of Thai society. These have often been linked with cancer and kidney disease; however, it is statistically proven that cancer and kidney disease have been the main reasons of Thai people's mortality. Some rumours have conversely provided information of Thai local food ingredients. It is assumed that this is a part of social media businesses creating 'clickbait' to earn profits online. The rumours have challenged scientific knowledge among Thai people by using the most misunderstood issues, e.g. the cause of HIV, to scare people. Apparently, some Thai people still show bias against it. The mood and tone of rumours link with media literacy. Thai people have basically been framed as being fearful of unexpected events and hoping for luck. The strong tone of messages can easily influence them, showing that some people, especially older individuals, are unable to identify the reliability of the rumours. The last point is about the reflection of relationships in Thai society. Some rumours use the language of friends talking to friends. In particular, Thai people normally refer to

outsiders as family members. This develops a close relationship between senders and readers, leading to trust in the messages.

This chapter shows the themes of disinformation about food in Thailand from 2013 to 2016. The situation still exists and some rumours are still circulated on Facebook. There are also other categories of fake news that have emerged. The disinformation of food is represented as part of bigger problems, e.g. the media literacy of Thai people, levels of scientific knowledge and the use of new media. The next chapter will discuss the reaction to this disinformation from related stakeholders.

3.8 Limitations

This chapter has limitations in the sources of data collection. Collecting the food rumour data was based on a personal Facebook account and arguably, it would be considered that the collected data was biased. However, the rumours that appear on the Internet are not organised systematically and not all of them are officially debunked by the government. In fact, many rumours are verified by science influencers. To overcome the limitations, the rumours coded in this chapter are focused only on the original message, not the debunked version since that would contain the debunker's personal opinions.

The process of data collection that applies in the grounded theory has not been fully performed. The purpose of food rumours is not aimed at theory development about the rumour but aims to extract the core themes because these themes could not apply to the types of rumours .

Firstly, I aim to apply NVivo software to help analyse the qualitative content. However, the message structures of the rumour data varied, such as personal experiences, new reports, short announcements and so forth. It is not necessary to have a verbatim analysis of the rumour. What is needed is to code the rumour from its words, statement

and the tone of the message. The English version would not be suitable to code because the translated version would not have the same language structure.

Chapter 4

Science Communication in Thailand

4.1 Introduction

Chapter three not only shows that food rumours affect misunderstandings about food and health but also the connection to Thai culture, the problems of media literacy and challenges in science knowledge. Overall, the themes of food rumours are reliability, the use of scientific statements, a sense of caution, hope and emotional play. Even though 73 rumours collected from 2013 to 2016 are only a small part of the complete online rumours, they do have some effects in the way people perceive online information. This shows that we need solutions from relevant official and unofficial sectors.

This chapter answers the second research question: 'In what way do food, health and other related sectors communicate on rumours?' Reaching the answer has been carried out by the in-depth interviews of the sectors working on food, science and health to gain different perspectives. The interviews involve 16 organisations, including government sectors, NGOs, the mass media, experts, medical sectors, private sectors and social influencers. All of them have communicated science, while some have also debunked rumours. The way each sector debunks rumours or publishes scientific content will reflect the science communication atmosphere. Following on from the four science communication models, I will analyse the current stage of science communication in Thailand.

To discuss the ways each sector deals with food rumour issues and their communication, this chapter will be divided into five parts. It begins with the data and methods, before describing the results and the context of science communication in Thailand, and then ends with a discussion and conclusion.

4.2 Data and Methods

4.2.1 Recruiting the Interviewees.

To recruit the interviewees purposive sampling was used, having targeted specific participants, with the topic being about food, health and media. The interviews were intended to reach the people who were willing to give information according to their experience and knowledge (Bernard, 2002; Lewis and Sheppard, 2006).

I firstly sent invitation letters, drafts of interview questions and ethical forms to them, acknowledging that the interviews would be recorded. I aimed to interview the related organisations as many times as possible within the two months allowed for fieldwork. The main participants were the government and social influencers because they were the key individuals taking the most action on food rumours on social media. Other interviewees were the mainstream media, NGOs, academics and private hospitals. The media includes one of the bestselling newspapers, an online media company, an alternative media channel and an association of online news providers. The NGOs were interesting participants because they have their own authority and policy in their work. They were in health, organic food lifestyle and consumer support.

I also invited two science academics because they had worked in the area of science communication. I contacted two social influencers through friends of friends, and these were a science lecturer, having over 300,000 followers, and a doctor, with 2,200,000 fans. I interviewed the Kidney Institute Hospital, as many food rumours are about food and kidney disease treatment, expecting that they should have experience with these patients. Most of the invitations were successful, and I interviewed one representative of each organisation.

The interviewed organisations are listed below with the interview date.

Government

1. Food and Drug Administration (18 December 2017)
2. Consumer Empowerment Division (12 February 2018)
3. National Cancer Institute of Thailand (8 January 2018)
4. Office of the Permanent Secretary, Ministry of Science (14 January 2018)
5. Digital Government Development Agency (GNews application) (5 February 2018)

Social Influencers

6. Dr Jessada Denduangboriphant (4 February 2018)
7. Drama Addict (26 December 2017)

NGOs

8. Thai Health Promotion Foundation (6 December 2017)
9. Greenery (28 January 2018)

Mainstream Media

10. Thairath (11 January 2018)
11. Manager Online (23 January 2018)
12. Voice TV (16 January 2018)
13. Society of Online News Providers (21 December 2017)
14. Sure-Korn-Share (Sure before Share) (11 February 2018)

Academics

15. Council of Science Dean of Thailand (15 January 2018)

Private Sectors

16. Kidney Institute Hospital (29 January 2018)

4.3 The Results

I designed the semi-structure interview questions because the interviewees are from different sectors. There will be both reduced number of questions and extra questions according to the characteristic of the interviewees. I grouped interviewees into two, according to their attribution to debunk food rumours and communicating science. The first group is interviewees who are debunking food rumours and communicating science. The second group was mainly concerned with science communication in specific issues according to their organisation.

Three interviewees; the Division of Consumer Empowerment (The government), a social influencer (Dr. Jessada) and the Sure-Korn-Share TV programme have answered all the interview questions. The results will report mainly on three interviewees because they both debunk rumours and communicate science. The responses from rest of the interviewees will be added to some of the questions. I will also add the interesting information from the rest of the interviewees sharing the view of science communication and publishing science knowledge.

There are seven questions. Questions 1-6 ask about the action towards food rumour and Question 7 asks about science communication. Question 7 has 9 sub-questions about science communication. The sub questions were tailored according to the experience of the interviewees. At the end of this section, I conclude the results into the table, summarising the themes that emerge from the interview.

4.3.1 Organisations Debunking Food Rumour and Communicating Science

These three interviewees debunk most food rumours and they communicate science. These include the Division of Consumer Empowerment (The government), a

social influencer (Dr. Jessada) and the Sure-Korn-Share TV programme. The brief description about the interviewees derive from their official websites.

a) The Consumer Empowerment Division and the FDA (Food and Drug Administration), the sub-department under the Food and Drug Administration (FDA), works on information about the safety of health products, especially cosmetics and drugs, supporting consumers with accurate information. They have 230,000 followers on Facebook and 570,000 on Twitter.

b) Sure-Korn-Share (Sure before Share), one of the Thai TV programmes, presents content about investigating online rumours. They started the programme in 2015 and continue until now, year 2020. They have debunked a number of online rumours, with 560 on health and 397 on food issues¹.

c) Dr. Jessada Denduangboriphant, another science social influencer, a science lecturer in the university. He is a well-known social media influencer debunking a lot of online rumours.

The interview was transcribed and analysed into seven themes according to the questions. The summary of the themes will be in the table 4.1

Q 1: What is your framework of communication on the issues of false food information / false information?

Theme: The framework of communication

The framework of communication among the interviewees provides the idea of the way they debunk or work on false information. There are slightly different and similar aspects. All the sectors have debunked the rumours. The Consumer Empowerment

¹ This Information Collected on 8 August 2019

Division and the Online News Provider Association have “developed the online platform” for people to search the rumour directory. The Sure-Korn-Share TV programme presents the debunking as a story, where a host finds an answer from reliable source for the public. It aims to “intervene sharing-news behaviour” by urging people to be aware of the accuracy. Dr.Jessada, the social influencer has debunked rumours in a more simplistic way, posting it on his Facebook account.

Consumer Empowerment Division: “...We will never know what false information will happen. Thus, we cannot debunk any false information in advance. It cannot be proactive communication...”

Consumer Empowerment Division: “... We have launched Check-Sure-Share section on our website allowing people to submit any queries to be investigated. The division considers itself as a tool for the public to be more engaged in the communication....”

Figure 4.1 shows the website of Check-Sure-Share administrated by the Consumer Empowerment Division. They have seven categories of topics including general, weight loss, health treatment, beauty, if you believe this you will die, and sex education.

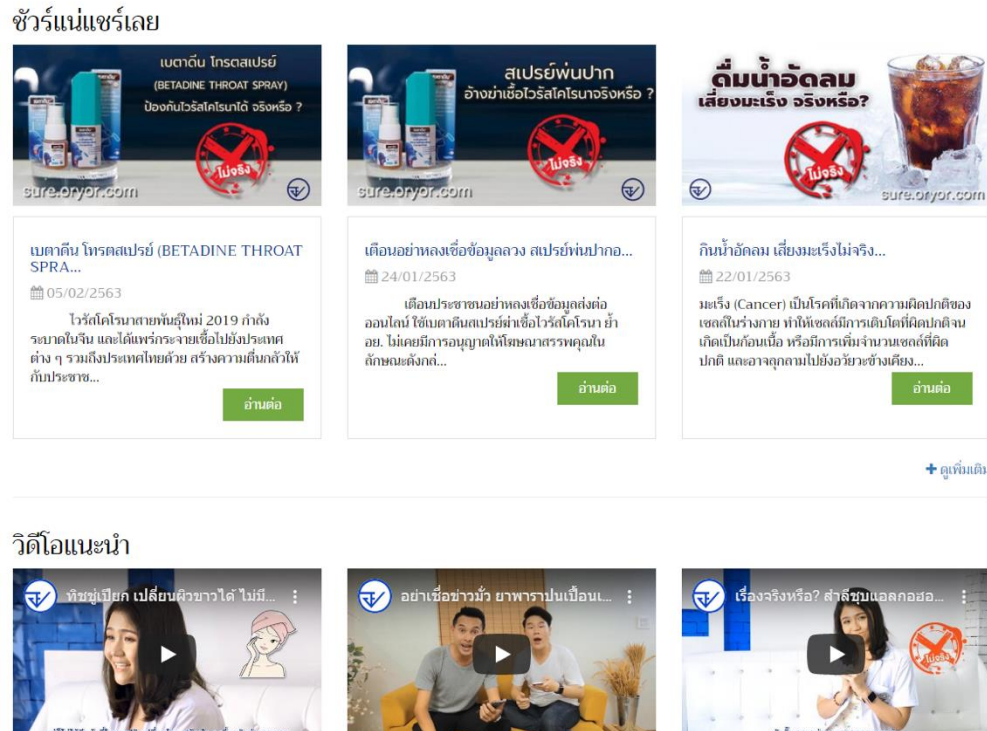
Figure 4.1



The Website of Check-Sure-Share

Figure 4.2 shows the content from the Consumer Empowerment Division providing the verified content that can be shared and the debunking rumour videos.

Figure 4.2



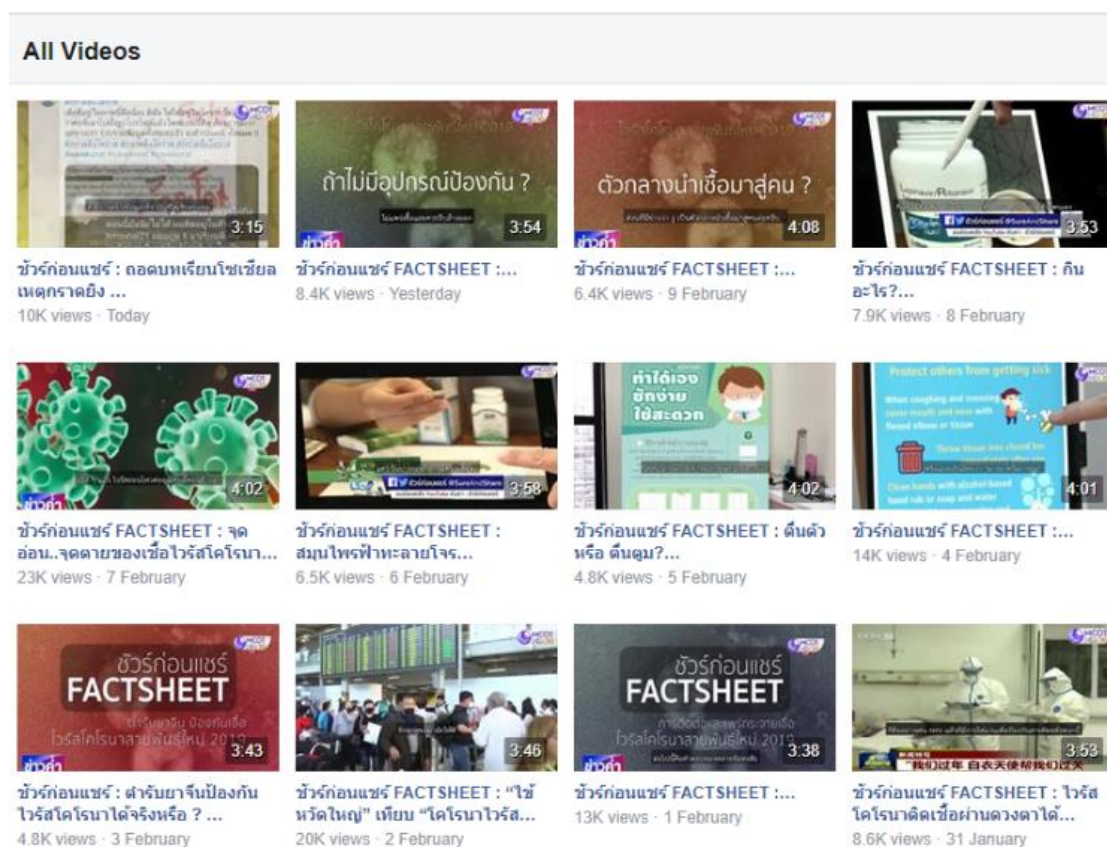
The Debunking Content from the Consumer Empowerment Division

Sure-Korn-Share TV host: "... We aim to intervene individual's behaviour when they use their smartphone to read the news. They may then forward it to others if they panic because of the information. We aim to interfere with this moment of behaviour. When I begin the show, I will act like I am reading some suspicious online information from my smartphone and say "Sure, really?" but I will not answer on my own because I do not have enough credibility to answer the issues. I will interview the experts instead. At the end of the TV programme I will conclude "True or false? Can you share?" This will help people to memorise what to do. Sure-Korn-Share tries to encourage people to make sure that 'it is all correct before sharing' ..."

Sure-Korn-Share TV host: “...I have to debunk rumours as clear as possible to the public, like “telling a story”. Every piece of content has to be “well understood” Also, it has to have the “reliable source” in the story e.g. doctors or academics in the video clip. In other words, the TV host concluded that the programme aims to serve “the final answer, with no further argument” to the public.

Sure-Korn-Share TV host “...If the rumour is in the form of a video clip, we firstly need to prove whether this is genuine or not. If the video clip is genuine, it must continue to be worked out whether the fake food in the video truly exists. The answer is most likely to be found in whether the making of fake food costs more than the real food. An interesting example is fake rice, which is claimed to be made from plastic. I must go to the plastic factory to demonstrate that the machine in the video clip is recycling plastic beads, not processing rice. It has to be clear to people after watching it...”

Figure 4.3

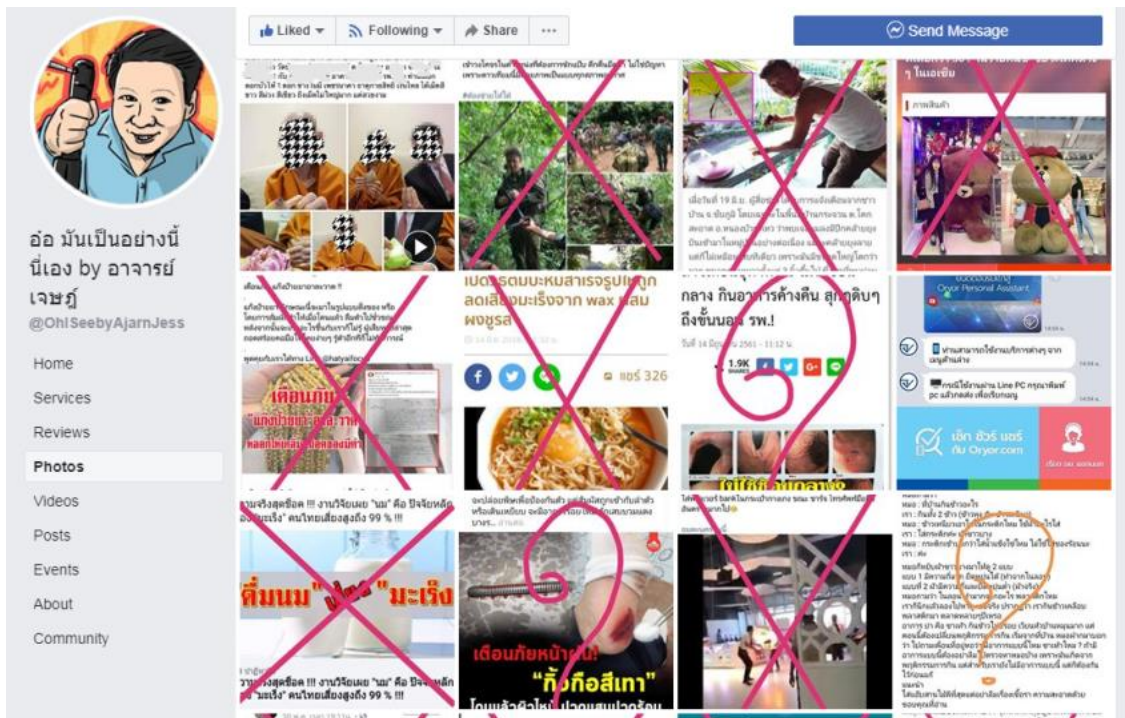


The Video Clip Collection from Sure-Korn-Share

Dr. Jessada: "...Since I've joined Facebook, I have seen the shared content and I know that it is not true. I thought that people should know it too. I decide to begin telling them by capturing that content, make a cross (x) over it and adding an explanation as to why it is not true. This has become my signature. I also 'answer everyone' individually through Facebook message, even though it is repetitive. This is because I believe that one can spread the word to many..."

Figure 4.4 shows his official Facebook account. He mostly debunks food and health rumours. The symbols of X (false) and ? (unsure) throughout the content have become his signature.

Figure 4.4



The Official Dr. Jessada Facebook Fanpage and the Debunking

Drama Addict: “... My communication about false information to people is like a friend to a friend, using informal language. I prefer to use strong words and sentences, including references and research and I leave the audience to decide what the right answer is...”

Drama Addict: “...debunking rumours will be best communicated by social media since it mainly occurs in these platforms. Any time that false information occurs, this does not need to be debunked immediately. Once it has been widely shared, that would be the right time to speak because people will learn about it by mistake. I also provide followers with a ‘how-to’ to find answers by giving people keywords...”

The Online News Provider Association “...We have a project called ‘sure-laew-share-dai’ (this is true, you can share it). We aim to encourage people to develop their

media literacy, allowing them to submit any clues of online rumours, educating them to be careful about sharing news. If there are any issues submitted, any media agency can take it and verify it. Later they can earn credits by investigating this issue. The public can use this feature on the website and type a keyword about any rumour issues..."

Figure 4.5 shows the website protocol which allows people to search for shared content to check whether it is true before sharing. They have verified several online issues in many categories, e.g. government news, weather forecasts, technology, etc. They have currently debunked around 33 issues collected on 20 December 2019

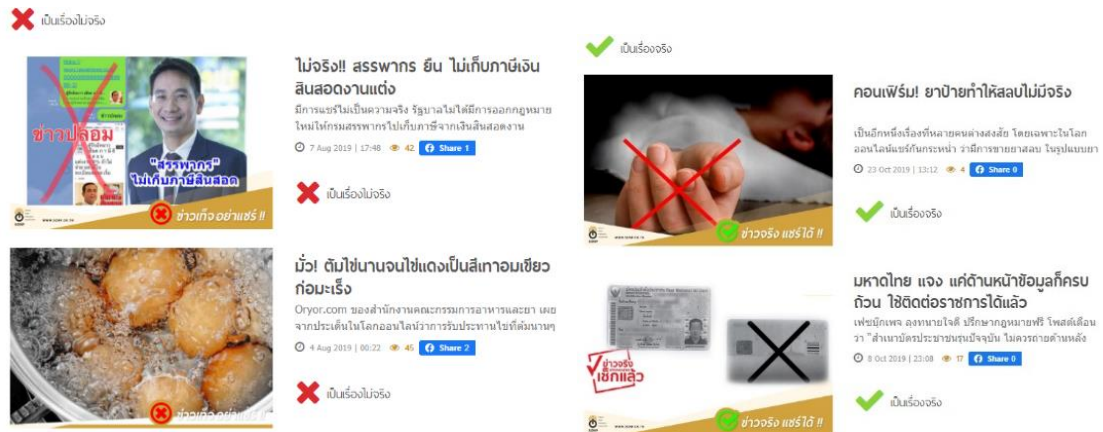
Figure 4.5



The Search Protocol of False Information from the Online News Provider Association

Figure 4.6 shows how they debunked a rumour using (✓) and (X) from The Online News Provider Association

Figure 4.6



The Debunking Content from the Online News Provider Association

The Digital Government Development Agency (Public Organisation) operates GNEWS application, one of the verified communication on smartphones from the Thai government. GNEWS does not work on food rumours but they have a platform for checking fake news.

The Digital Government Development Agency: "... GNews comes from government news. It is a forced channel of communication to all sectors from the government to communicate to the public. GNEWS aim to engage using online communication. It has a section of "checking fake news" on the application ..."

Figure 4.7 shows the section of “checking fake news” from GNEWS application. The issues reported are various e.g. labour, weather forecast, food safety etc.

Figure 4.7



The “Checking Confirmation News” Section from the GNEWS Application

The other interviewees show the views and the work towards experiencing of false information in general issues or hot topics. Thairath and Manager Online are mainstream media companies. They have slightly different view of reporting information. Thairath consider “speed of communication” is critical while Manager Online focus on “the final result” and “developing the content” as a journalist. The National Cancer Institute of Thailand shows more action by passive communication by giving an interview and broadcasting through television. Their active communication will need to have the final decision by the director, showing a “bureaucracy process” of

communication. The bureaucracy process of communication is also reflected in the Consumer Empowerment Division, in other words, among the government sectors.

Thairath: "...We regard the "speed of communication" as critical. If we find any suspicious issues, we will find reliable sources and contact that person as soon as possible. If that issue has a strong impact on the public, we will report it, even though the investigation has not yet been finalised, within one hour. We will report the news again when they have a final result. If the issue still has attention, we will report repeatedly but adjust the content through photos or infographics. Having speedy reporting can easily cause mistakes. It also develops more competition among media agencies, rather than concern regarding the quality and accuracy of the information..."

Manager Online: "... We have a section called "hot share" to report final answers from reliable sources. Once we find any hot social media issues, we will verify them by contacting experts. We do not report until answers are finalised. The 'hot share' section does not take all social media issues into account; issues have to be developed for it to be interesting content..."

Manager Online: "... Being a journalist should involve verifying and reporting the truth. Even though content about health, food or anything hazardous is sometimes not very interesting, we still report it. We found that the public mostly need 'answers' from the hot issues; lengthy content is likely to be ignored. People need 'short, digestible and quick' messages since a lot of them read content from smartphones..."

The National Cancer Institute of Thailand: "...If there is suspicious information about cancer, journalists and TV hosts will contact the director (me) to ask for the interview. We will have an urgent meeting if any important news occurs and try to clarify

it to the public on the same day, but we have to choose the issue that may affect the majority of people. For example, a rumour states that “Thailand has the highest amount of cancer patients because of overnight meals, eating food containing coconut, eating beef. This type of news is regarded as urgent, and they will create infographics against the hoaxes...”

The National Cancer Institute of Thailand: “...The director (me) will make a decision about the content to become infographic, making sure that it will be approachable for laypeople. It would take up to 48 hours to finish the infographic media so that it is ready to be released. However, people can contact the institution if they have any queries about cancer”.

Consumer Empowerment Division: “...I agree that the longer time taken to publish content is a problem. I have raised these issues. However, the director stands for accuracy more than speed. If it is an urgent case, it can be issued in a day. General knowledge will take a longer process.”

Q 2 What do you think about the important character of food rumours?

Theme: Important character of food rumours

The character of food rumour from the three sectors are similar. They have mentioned that the food rumours are about “dealing with the feeling of hope, scaremongering or avoidance” of eating food.

Consumer Empowerment Division: “... They are selling the hope. If you can notice, they are selling the hope that people are waiting for. For example, there is a good drug to cure medicine. They often claim that they are able to cure the treatment that does not have any successful treatment...”

Sure-Korn-Share TV host: "...Fake news in Thailand is about frightening people and earning a "click" from online users. It is an issue closed to our lives and people are ready to believe because our background was not based on science. However, it was both positive and negative. Too much science would make us robotic. We have believed in something by not having scientific proof. The food rumours are a part of a health issue. There are two types; advice and warning. It means eat it for recovering and eat it in order to be ill. The most commonly mentioned is cancer. For example, eat it and the cancer will be gone..."

Dr. Jessada: "... There are two types; avoid eating due to the hazards and encourage eating because of the benefits. The first one is about making up a story or making it more complicated. They are even making a fake claim, referring to a well-known organisation. More statements that are complicated will be "the survey found that..." "there is an overdose of the chemical". For the ones that are asking people to eat is about claiming health treatment. The rumours have been made to touch what people need; food, medicine, money or mobile phones. It makes us want to listen to as well as others because it is important".

Manager Online: "... The sick people will have hope to anything, even though it is not true, especially a cancer patient. If they found that 'any doctors' made a statement, they are ready to believe..."

Since the food rumours have often been linked with the kidney disease, it would be beneficial to have an interview from The Kidney Institute Hospital, having experience directly with kidney disease patients.

Doctors, The Kidney Institute Hospital: "...The content that give hope to the reader. It is likely that the patient who has a permanent disease will welcome to try alternative methods because they believe that they will recover..."

Q 3 What do you think about the most important tool to communicate about food rumours?

Theme: The most important tool to communicate about food rumours

The interviewees have different points of view to the important tool for communicating food rumours. Sure-Korn-Share TV host and Dr. Jessada have similar points that the content must be completed at once. While Dr. Jessada concluded the results in the first line of the content, the TV host must complete the story in one episode.

Consumer Empowerment Division: "... It is about channel of communication. Since the food rumours start online, we are going to attack from there too. If people access false food rumours, they should find the accurate information from us too..."

Sure-Korn-Share TV host: "... It has to make people believe in us. Every episode has to plan how to convince them. I am the journalist, different from Dr. Jessada because I need to find the reliable person. I have to create a plot, sometimes I need to show them by eating it myself. I believe that the audience is waiting for someone to prove it for them. Some issue is enough just by explanation. The important criteria are planning a believable plot, finding trustable person, having a trustable investigation method including reporting at the right time because one issue has its own trend..."

Dr. Jessada: "... It is about making it simple. We need to understand the audience. One content has to locate clearly what you are going to say. We need to use accessible language that everyone can understand. You may add additional photos and graphics

but the key point is “making it simple”. I have learnt that people will be interested if it is a photo. Thus, I tried to make people understand instantly if they see my post. I have to make one concluding statement on the first line whether it is “true” or “false” ...”

I had a chance to interview Dr. Jessada twice. Later he found that stopping the wide spread of rumours needs a report in mainstream media.

Dr. Jessada: “... I have become more well-known and media journalists ask me about issues. If any issues reach the mainstream media, it is impactful compared to my post. People share my post but if the content is reported in “Thairath”, the impact is far greater. The issue reported on mainstream media is the current issue that is catching attention at that moment...”

Q 4 What do you think about the most vulnerable group believing in false food rumour?

Theme: The most vulnerable group for false food rumours

Consumer Empowerment Division: “.... The first group is the desperate patients who are waiting for the last hope. For example, they are ready to try if the cousins or family would have found any treatment possibilities. The second group is patients who lacks funds for the treatment; they would look for the cheaper option...”

Sure-Korn-Share TV host: “...If there is something about health rumours, the senior people would be those who believe in it the most...”

Dr. Jessada: “...It can be anyone, even those who are educated. The senior people would be the group to be aware of because the content about rumours mostly link with health...”

Manager Online: "... We consider the public to be vulnerable to misunderstandings; they are prone to believing in false information..."

Q 5 What do you think about the feedback after debunking food rumours?

Theme: The feedback after debunking food rumours

Consumer Empowerment Division: "... I think it is gradually getting better. Some Thai people are more health conscious. However, it is hard to detect the feedback. When we found that there false information has been shared, we debunk it and publish our content. It does not guarantee that it will be delivered to the person who shared. What we do is try to deliver to the public as wide as possible..."

Sure-Korn-Share TV host: "... It seems to work at the certain level. If comparing it to a sickness, it has not yet recovered..."

Dr. Jessada: "... I have kept on debunking until the queries from people are much lower than before during the last 3-4 years. Some of the false-shared news is aged over 30 years. It begins with a chain email and it is the same story but appears on different platforms. No one has disputed them in the past. That makes people just believe in it. Now social media users can tell the truth. The mainstream media also helps reporting. I still answer everyone individually because I enjoy it. If one knows the truth, he/she can tell others..."

Doctors, The Kidney Institute Hospital: "...I found that more people are sensible to perceive the information. We receive more phone calls asking about the effects of food effects on kidney disease before they eat it."

Q 6 What do you think about the long-term solutions to the food rumours?

Theme: The long-term solution to the food rumours

Consumer Empowerment Division: “...We will need to be active by raising the awareness among people that sharing unverified information is a crime. The second point is developing reliable sources. We need to provide various types of content and promote our channels...”

Sure-Korn-Share TV host: “...We might not fully remove fake news. However, we can deal with the people (audience). The government would need to add more input that is accurate, develop the verified content, research what type of communication that matches with Thai people,

Dr. Jessada: “... It would be a collaboration of society. If there is an issue of an old rumour and if many people dispute it, the issue will disappear. However, it will require someone to be an initiator to confirm that it is false. Then the verification will continue. Unless we have a verified organisation to inform the public about clickbait websites, set up a punishment to whoever created the fake news. What we can do on our own is be aware of the information...”

Thai Health Foundation: “...We will need to come back to the human development as well as the environment and policy to support them. The policy system will have to support it. We will need the consumer protection organisation...”

Q 7: What is your framework of science communication to public?

Theme: Framework of science communication

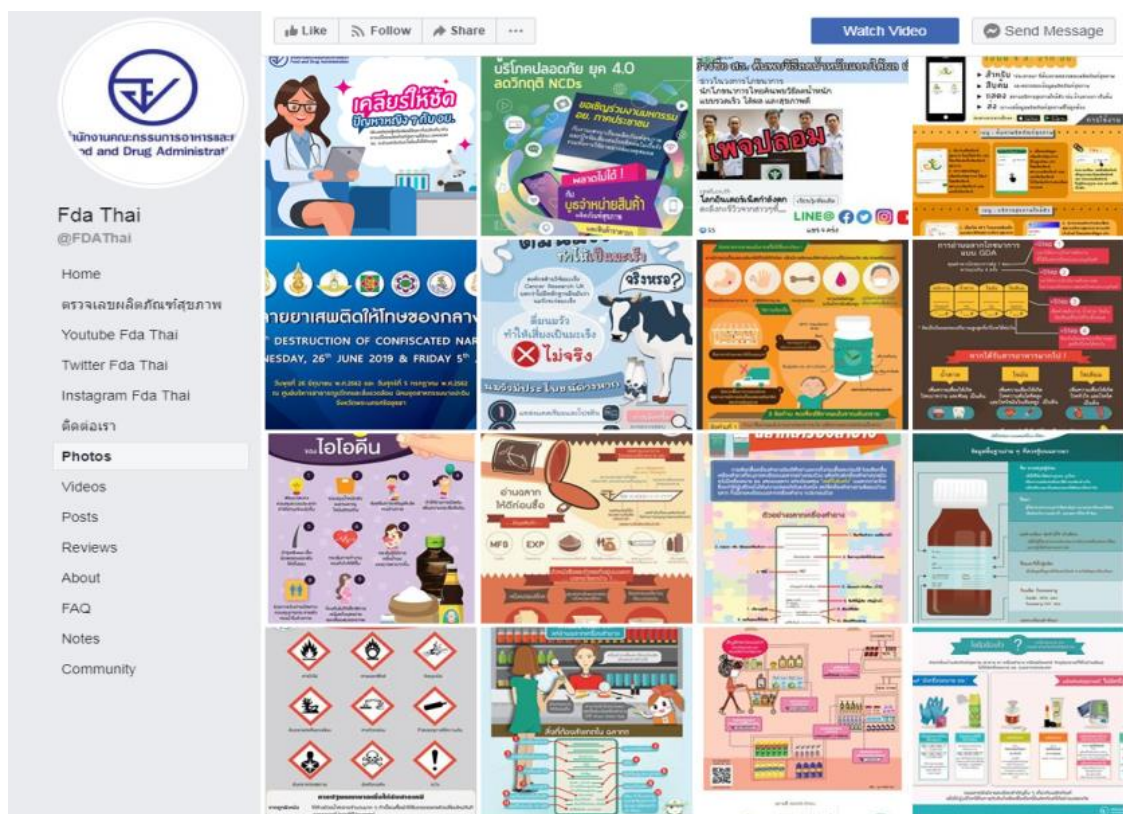
Consumer Empowerment Division: “... We have a system called “social media monitoring” to accumulate the keywords on social media, selecting what is relevant to

their organisation. We later take action on those issues. We have both an offline television spot and documentary and online channels, as well as official and unofficial websites, social media, YouTube channels and smartphone applications. We have run activities in schools about health knowledge for 15 years, which educate children to carefully read food labels, focusing on sugar and salt – the main concern of health...”

Consumer Empowerment Division: “... The official website (<http://www.fda.moph.go.th/>) is there to advertise and upload organisation newsletters, while the unofficial website aims to provide health knowledge and information for the public. It has the section ‘check-sure-share’ that has collected over 100 debunking issues and this continues to accumulate. This section links to the unofficial website (<https://sure.oryor.com/>)...”

Figure 4.8 shows the way they communicate to the public on various issues. The FDA has made many health knowledge infographics for their social media, e.g. how to use drugs.

Figure 4.8



The Infographic from Food and Drug Administration

Sure-Korn-Share TV host: "... As we target the public, the content has to be made simple. In addition, it is about the "type of media that matches the story". Everything has to be based on "being easy to understand" The framework of science communication from Sure-Korn-Share is about considering it in terms of it "being matched to the audience and appropriate for people to share". *Some issues would be better in the video with the speaker, some is better with texts or video-infographics...*"

Sure-Korn-Share TV host: "...We opened 'Line' official application, where the public can submit any issues that they want to be investigated. The queries will be answered within one day..."

Sure-Korn-Share TV host: “All the video clips aired on television will be uploaded to the official Facebook page. Some urgent or short issues will be in the form of an infographic to uploaded on to Facebook. Some issues fit well in a long video, while others are best in a short piece of text. Infographics and videos are quite effective communication tools. They can combine to form video-infographics or infographic-videos”

Dr Jessada: “...thinking on behalf of general people – in other words, imagining that scientists are laypeople”. This will lead to the use of language that is accessible for more people, rather than using academic language. Scientists should stay “simple” and have a clear main concept to communicate, including supporting ideas, photos and beautiful graphics. The issues to be communicated should link science with everyday surroundings...”

Drama Addict: “... Apart from social media, I published a book to communicate science about sex education. I believe it catches high attention because the content is interesting. The hard-copy references as being highly reliable and concrete...”

Drama Addict: “...The language of communication has to ‘touch’ the audience’s feelings in either positive or negative ways. Positive communication means it makes the audience have fun, while the negative means drama, fear or anger. Later it can go viral...”

Q 7 (1) What do you think about science communication in Thailand?

I have interviewed more deeply about science communication with Dr. Jessada and partly with the Consumer Empowerment Division than others, as they both work immensely on communicating to the public.

Dr Jessada: "... I think science communication is whoever can communicate scientific content effectively. There are so many people in the USA who are not scientists but they have communicated well about science. They can be a scientist who becomes a communicator. However, there are not many people in Thailand doing it. Some would be anonymous when they speak so we do not know who they are. Science and Communication are two words. If you graduate from Communication Arts but you often, communicate science, I think it counts."

Q 7 (2) My assumption is that Thai people do not want to listen to science, do we need to have an issue that links their life to science?

Dr. Jessada: "... I disagree. I think many people want to listen to science – a huge niche. However, there is no one who support this demand. Someone who wants to do it perhaps does not have a qualification in performance too. The media companies need to have scientists as a resource in order to produce scientific content. I am happy that my debunking has been of interest but I am surprised that I received many 'likes' when I publish general issues of science about astronomy topics. I discussed with many people by commenting on Facebook. I believe that Thai society wants to listen to science but no one "digests" the knowledge for them..."

Dr. Jessada: "...Science communication can be made easier to make people understand. The trick is linking the issue with everyday life surroundings, drawing them in to show that science can explain about it..."

Q 7 (3) From the amount of rumours shared, it shows that Thai people lack common science knowledge in some issues e.g. the cause of AIDs. I assume that to raise the attention on science among Thai people, do we need to begin with these everyday issues or their interest rather than scientists speaking?

Dr. Jessada: "... I agree. The old science knowledge is only published in books, but social media can help people follow what they are interested in. It would be better if the government could take more action on this..."

Consumer Empowerment Division: "... It is not 100% because some issues, the government has predicted and planned for because some issues come regularly in a season. For example, we launched a campaign about disease from mosquitos in the rainy season. The government will receive some information first, before the public has raised awareness..."

Q 7 (4) Since we found that people perceive false information and the expert later debunks it, then the experts receive trust. Can we regard science communication in Thailand is in a reverse way because normally scientists are likely to be the ones who begin communicating science?

Dr. Jessada: "... This is interesting since I have never looked at it this way. We will need to find the appropriate format for our society. If I can reform Ministry of Science, I would set up my team of science communicators. We have the lead speakers but they often mislead people. I found that one doctor said "eating lard (pork fat) is better than

vegetable oil". Many people share this information because it matches some of them who wants to do it. However, that doctor is not a real doctor...."

Q 7 (5) My assumption of a science communication state would be where the first stage is where the public would receive the knowledge from the experts. What do you think?

Dr. Jessada : "... I think we are at stage one. Not often people would be sceptical whether it is true or false. They only believe it or do not believe in it. For example, there are people who believe that fake food really exists. However, I still agree that we need to keep informing the public but it should be the government's responsibility and not mine.

Consumer Empowerment Division : "... I think we are on stage 2 because we do a lot of public hearings (in some issues). We do have a project that asks for collaboration from the public.

Q 7 (6) Can Thai people increase their performance to have discussions with experts in the future?

Dr. Jessada : "... I think it is possible. I have met more people since I have had a chance to broadcast on the radio, where I receive the same questions about food rumours. This means that my communication on Facebook does not reach to every part of society..."

Q 7 (7) To what extent you think we speak scientifically?

Dr. Jessada: " If it is about science news, it is still low. However, we obviously use science to answer the queries. Science knowledge has become more of answer and explanation in the society..."

Q 7 (8) Do you still think that you will keep communicating science knowledge?

Dr. Jessada: “...Yes, I feel it is my role. My Facebook feed is about issuing my science knowledge to the public. I will consider if people need to know...this and ...this at this time...”

These organisations do not actually debunk food rumours; however, they still communicate science in the area of food, health or science and also give their viewpoints to develop science communication in Thailand. I will present this group of interviewees in terms of their viewpoints on science communication.

Q 7 (9) How do you consider your position about the communication of science to the public?

Consumer Empowerment Division: “...I think that we try to build two-way communication. More and more people are health conscious and are interested in their health. I am confident that the section of consumer empowerment will work closer with the public...”

4.3.2 The other interviewees and their views about science communication

The other interviewees shared the view of science communication in different ways, especially the Council of Science Dean of Thailand. He develops science communication academically by supporting science human resources to have a skill of science communication – becoming “personal media”. The interesting case is Greenery providing healthy living through workshops and publishing scientific content every day on their platform. The Online News Provider Association insists that social media will be the right way as it has huge influences compared to traditional media. The Thai Health Promotion Foundation has strong communication channels and team; as a result, they aim to

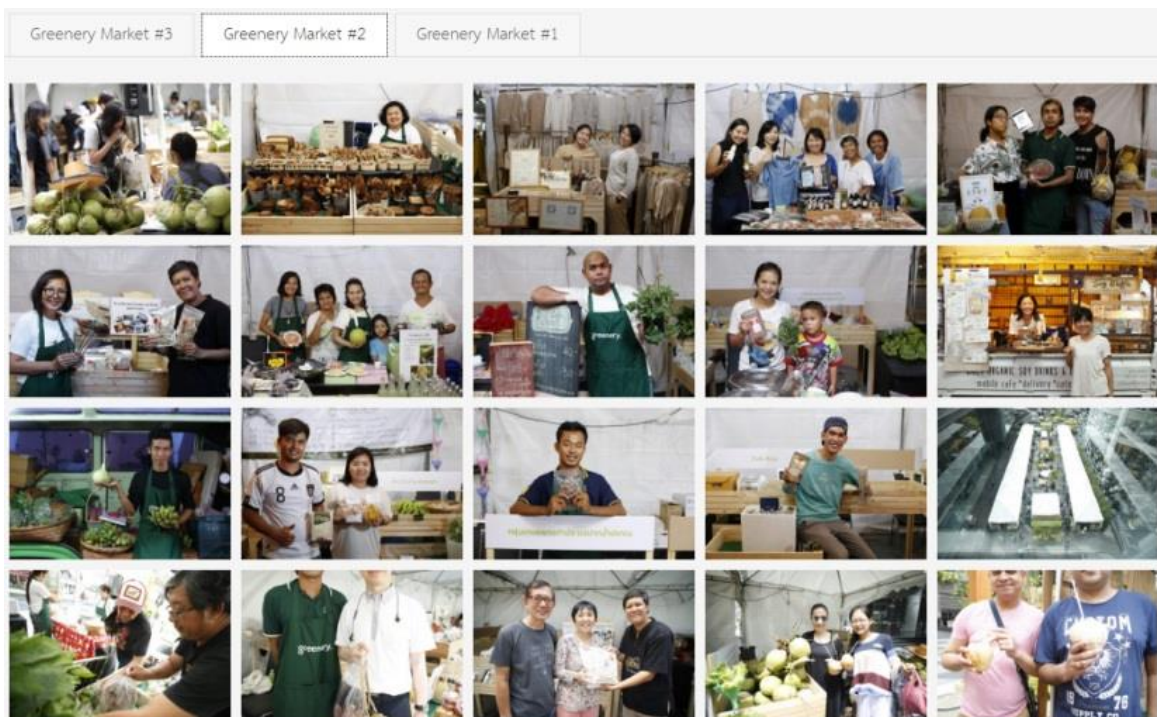
support “media literacy” to the public. Thairath and Manager Online, as being a media itself, they focus on “the content”, “the way to catch attention”, “speed of reporting”, the “digestion of the message”.

The Council of Science Dean of Thailand: “... the council plans to develop science lecturers to become skilled science communicators by supporting them to join training courses. Those people will develop the structure of science academic courses. They need to develop in order to have better skills of communication, using language that catches the public’s attention. If we input science communication into the scientist, then he/she can become a science influencer. Developing science workers to have skills of communication and possibly expecting them to be influencers should become a trend. We aim to have scientists who know how to use social media effectively and efficiently in order to be knowledge supporters to the society. This is the long-term mission – lifelong learning.”

Greenery: “...We have developed a community network, encouraging urban people to understand food safety and planning to expand it into a larger network. Activities concern food safety workshops, non-chemical vegetable growing and farmers’ markets. We have targeted our audience to be urban people aged between 20 and 35 because we believe that they have want to have a better quality of life and health. We create one food content piece per day, with a total of 365 pieces per year because we believe that they give a better detailed insight than infographics. The infographics sometimes can become fake news. The most effective way to communicate is through video but this costs more than other types of media. We decided to do short videos called ‘minute videos’...”

Greenery: “...We plan to develop our Instagram platform to reach the young generation, while considering Facebook as our tool to release content. Since Facebook limits posts from fan pages, it requires money to boost its reach to the public. Thus, we use our own website as the main platform. The future communication plans are to develop more content about food safety...” (Facebook limitation/policy)

Figure 4.9



The Activity of the Running of the Green Market by Greenery

The Online News Provider Association: “...the communication on social media has power over traditional media. People would rather slide smartphone screens to read the news than watch television. Facebook is the powerful channel because it can reach the public by boosting its posts. The most effective method of communication is infographic. The content has to be shorter and suited for reading from a smartphone screen...”

The Online News Provider Association: “If the journalist meets any inaccurate issues, we prefer not to battle directly to the owner of the content, instead through our own content. For example, if we found an issue of not supporting breastfeeding, this is surely not right because it is necessary for a baby. We would create content about the benefits of breastfeeding, probably interviewing doctors to receive valid sources...”

The National Cancer Institute of Thailand: “...We regularly broadcast our interviews on television, digital TV and the radio. We have a mobile application called ‘Roo-Tun-Roak-Ma-Reng’ (the best to know about cancer) including the information about cancer. We concern ourselves about cancer hoaxes and try to provide accurate information as quick as possible...”

The Thai Health Promotion Foundation: “...We have all channels of communications; official website, Facebook, Twitter and YouTube, as well as running social events and conferences. We regularly publish content about good health advice, e.g. food, exercise, avoiding sickness, drug addiction, etc. We communicate food issues about healthy eating, such as low sugar, low sodium, low fat and breastfeeding. We have a social media marketing team to adjust and digest the content to the targeted audience, called a communication strategy. Also, a research and development team who check responses after communication by observing from mainstream media...”

The Thai Health Promotion Foundation: “...We aim to support people in having “media literacy”. This even goes beyond verifying fake news to building media capacity. Media literacy skills are going to be included in educational courses in schools. I do not consider their communication because disinformation still exists...”

Thairath: "...We found that successful deliverance of messages to a lot of people is dependent on 'content', 'the form of content', and the speed of reporting. The video is the most effective type of media. Facebook is the platform to reach more audiences; however, we have to follow Facebook's policy. If Facebook changes to limit normal posts while increasing the level of videos, Thairath will have to create video more than he does text. This means that high adaptation is always required to use the Facebook platform..."

Thairath: "... We attempt to have "friendly communication" with the public, while maintaining a reliable character, being welcoming to any comments and giving responses back. We need to make our content new and outstanding online because Facebook, YouTube and Instagram have a strong influence in the Thai online community. However, we also have a local journalist in a distanced area to keep a closer relationship with the people..."

Manager Online: "...We have to transcribe explanations from doctors or complicated sources for the public. For example, apart from reporting the debunked content, we will add the cause of diabetes to food rumours linked to diabetes. Scientific vocabulary will be transformed into simple explanations. For instance, 'sodium nitrate' will need to be described in terms of effects on health, not just used on its own..."

Manager Online: "... An unofficial report will likely catch the attention of the public. For example, we found that the number of Facebook live views is relatively high, at 100,000, when a journalist just uses their smartphone. It provides a closer relationship to the audience. Language used has to be informal and as if a friend..."

Voice TV, the media agency, does not communicate science. However, they have provided a view of communication online successfully. They adapt their communication

according to the platform, having a targeted participant and they make the content simple but still use technical and English words if necessary.

Voice TV: "...Our content is about politics, economics, the world, entertainment and well-being, as well as targeting the young generation as an audience. We often use "infographics and videos" more than text, as people focus for longer on watching than reading. We still use English words if necessary in their content because we believe that our audience is capable of understanding it..."

Voice TV: "... We have different style of communication due to the platform. Communication on Facebook will be more relaxed, approachable, and fun because Facebook offers the communication as friend-to-friend. Twitter is better with communication to young generation (younger people than on Facebook). Our Instagram will focus on the feel-good mood in photos and video clips..."

Voice TV: "...We need to locate our targeted audience. This will help us survive amongst the high competition. We found that people would like to share our content and create their own discussion in their account..."

The communication between a doctor and a patient is somehow about educating science to the people. Since the doctors are not only dealing with the treatment process but they must develop trust from the patients, especially those who come from believing in alternative kidney-disease treatment.

Doctors, the Kidney Institute Hospital: "...I have to speak to the patients to make them understand their diagnosis results, e.g. blood tests. They will learn what is really happening in their kidneys. It gives them trust in their doctor and the information...."

4.3.3 Conclusion of the results: Themes

Table 4.1: The Summarising Themes of the Interviews

Since the interviewees come from different sectors. There are both common and different attitudes. This table attempt to summarise the outstanding points of them. As not all of them work on debunking false rumour, some parts of table will be not applicable.

Topic Organisation	<i>Framework of communication in the issues of false food rumour</i>	<i>Important character of food rumours</i>	The most important tool to communicate about food rumour	The most vulnerable group of false food rumours	The feedbacks after debunking food rumours	The long-term solution to the food rumours	<i>Framework of science communication</i>
The Consumer Empowerment Division	Develop a platform on the website (The search Engine)	Selling a hope	Channel of Communication	The Patient	Positive	Raise awareness among public	Social Media Monitoring Social media channel of communication
Sure Korn Share	Providing a debunk and publish science content	Frighten People	Well-planned content	Senior People	Positive	Collaboration between the government and the public	Making the content simple The right type of media and content
Dr. Jessada	Providing a debunk and publish science content	Selling a hope Frighten People	Making it simple Mainstream Media	Everyone	Positive	Collaboration between the government and the public	Accessible Language Link the issues with everyday surroundings

Table 4.2: The Summarising Themes of the Interviews (The Remaining Interviewees)

The remaining interviewees have not debunked rumours. The theme categories reduce to five.

Topic Organisation	<i>Framework of science communication</i>	<i>Important character of false information</i>	<i>The most important tool to communicate about science information</i>	<i>The feedbacks after delivering a communication</i>	<i>The long-term solution to communicate false information</i>
The Council of Science Dean of Thailand	Developing Science Resources to become communicators	<i>Not Applicable</i>	Scientists have to know how to use social media professionally	<i>Not Applicable</i>	There should be a law to prevent the sharing of false information
Greenery	Develop Community Networks	<i>Not Applicable</i>	Building community networks and promoting eat good and live green	Success, having more followers	Education to the online users
The Online News Provider Association	The project “sure laew share dai” (This is sure, you can share) Developing content to communicate to the public	It is strongly related to business.	Develop a platform on the website for the public (The search Engine)	<i>Not Applicable (by that time of interviewing the project has not been completed yet)</i>	Education to the younger generation with media literacy
The Director of the National Cancer Institute of Thailand	Being the centre of cancer information. Having strong internal communication before communicating to the public Providing Knowledge through a mobile application	Claiming that cancer is leading to death due to the food	Social media including Facebook, Line official and the mobile application	Unable to locate the feedback. However, the centre is still the main sector that the media asks for information	Only to be enforced by law

Topic Organisation	<i>Framework of science communication</i>	<i>Important character of false information</i>	The most important tool to communicate about science information	The feedbacks after delivering a communication	The long-term solution to communicate false information
The Council of Science Dean of Thailand	Developing Science Resources to become communicators	<i>Not Applicable</i>	Scientists have to know how to use social media professionally	<i>Not Applicable</i>	There should be a law to prevent the sharing of false information
Greenery	Develop Community Networks	<i>Not Applicable</i>	Building community networks and promoting eat good and live green	Success, having more followers	Education to the online users
The Online News Provider Association	The project “sure laew share dai” (This is sure, you can share) Developing content to communicate to the public	It is strongly related to business.	Develop a platform on the website for the public (The search Engine)	<i>Not Applicable (by that time of interviewing the project has not been completed yet)</i>	Education to the younger generation with media literacy
The Director of the National Cancer Institute of Thailand	Being the centre of cancer information. Having strong internal communication before communicating to the public Providing Knowledge through a mobile application	Claiming that cancer is leading to death due to the food	Social media including Facebook, Line official and the mobile application	Unable to locate the feedback. However, the centre is still the main sector that the media asks for information	Only to be enforced by law

Topic Organisation	<i>Framework of science communication</i>	<i>Important character of false information</i>	The most important tool to communicate about science information	The feedbacks after delivering a communication	The long-term solution to communicate false information
The Thai Health Promotion Foundation	Friendly communication but having a social marketing team to help digest the information but targeting clearly to the population. Media Literacy.	The sender seems to be trustable, having a title (Dr. etc). The content is about giving only benefits. They will target distant or rural people	Social Marketing team to adjust the content.	Check from the media channels and by research team	Human Development
Thairath	Speed of Communication - Quick Response Content, form of Content and speed of reporting Friendly Communication	Dealing in what people are fearful of e.g. cancer	Digesting the difficulty of the content and including photos, infographics and explanations from the host (announcer)	Moderately successful especially in high profile issues. They believe in their influence towards public	Try to manage the starting point of newly released false information. This could be managed by DSI

Topic Organisation	<i>Framework of communication in the issues of science information</i>	<i>Important character of false information</i>	The most important tool to communicate about science information	The feedbacks after delivering a communication	The long-term solution to communicate false information
Manager Online	Monitoring until the final answer is received Digestion of the complicated context Accessible Language	Selling hope	Using language that is accessible to everyone	Not regarding it as a success. However, we are proud that some content has been widely shared.	Developing more and strengthening human resources to deal with the information.
The Kidney Institute Hospital	<i>Not Applicable</i>	Selling hope	Making people trust in the doctor, believing in the information that doctor diagnoses.	Moderately successful. However, it has to be monitored. The previous rumour mostly has been perceived as false.	<i>Not Applicable</i>
Voice TV	Media has to serve valuable content to the public in order to encourage them to develop their analytic skills. The right type of media and content. Targeted Audience. Different social media platform use different types of media.	<i>Not Applicable</i>	The information has to be accurately confirmed from the verified source, not considering speediness as a priority.	Having loyal fans visiting regularly on the platform.	It is truly a challenge. It could be a Facebook page to contribute work against false information

4.4 Analysis and Discussion

4.4.1 Analysis of the interview themes

There are eight main themes deriving from the interviews. The first theme is about the way they 'speak' about the rumour. Three interviewees working on food rumours all have a social media platform but use it in a different way. The social influencer uses it as the main channel of communication while the government and TV programme use it as a space for promoting their official platform. The debunking from social influencers reflects direct communication to the public. The communication from the TV programme (Sure-before-Share) delivers to more people, meaning that they are having more active communication as a social influencer. The communication from the government under the website and search platform would be passive communication because they ask people to go to their website. The different styles of communication reflect the way they tackle the problems. The TV programme seems to be the communication that has the greatest impact. Not only it is on aired on TV, but they aim to "intervene" so that the online user's behaviour becomes more sceptical. This action and communication would change the way people receive and perceive online information from the beginning. The social influencer's communication is the fastest. They do not have any regulations about releasing their communication to the public. Thus, they make their message to be "simple" in order to be accessible to the public. The communication from the government is released systematically under a bureaucratic process and the organisation's policy. This means the amount of messages from the government is lower, compared to the other two, but it guarantees its accuracy. Overall, the core framework of communicating

about rumour verification is to urge people to be sceptical with accessible and accurate information.

The important characteristics of food rumours are about selling hope and frightening the people. The rumour is then 'a made-up story of what people desire' but also 'a story of what scares people'.

To debunk rumours, three interviewees show different viewpoints about 'tools' for the communication. The TV host and the social influencer are more concerned about the "content" while the government said it is about "channel of communication". The content for this period must be "brief and simple". All tools are important. They reflect that communication in the world of the hi-speed Internet, currently in the 4th generation of mobile technology releasing in the late 2000s. It demonstrates an intensive competition about delivering the message to the people. It requires strong performance and potential of the speakers and the message. The content must be simple with the message being 'not too long'. Whether a message is 'too long' should be measured by the length of a smartphone screen. This reflects the modern life of information consumption. There are more choices of communication channels. The online channel plays a role, but the traditional media delivers the message to more people.

The interviewees agree that the most vulnerable group to misperceive the rumours can be anyone. The government suggests that the desperate patient who struggles to find the last hope for treatment. Some of them who have a lack of funds to continue their treatment at the hospital, would believe in such rumours. This shows that we, as social media users, can intentionally or accidentally trust in the rumours if we are matched with the rumour that is served up. No matter

the level of your educational background, you could believe in the false online information.

According to the feedback, they have noticed that people are getting better to identify whether food rumours are not true. Some people also become more health conscious. Although it is difficult to fully track the feedback, the social influencer has noticed that he answers people about old food rumours less than in the past. It is noted that information posted online may not be delivered to the entire public, but speaking to the public must be continued. Even though the interviewees cannot confirm about the feedback, it shows that having positive feedback requires time to educate people to know about the online disinformation. It would be nearly impossible to debunk all of the rumours on the Internet. At least some of the previous food rumours shall not become widespread again.

The long-term solution to the food rumours suggested by the interviewees are in the macro level. The government focuses on raising awareness amongst the public to learn that it can be a 'crime' to share unverified information. Meanwhile, the TV programme thought that the government should give more input about the accurate information. Social influencer supports 'the collaboration of society' to help tackle rumours, but there should be an initiator to start speaking about it. Last, the 'human development' will root for the long-term solution. All suggested long-term solutions are clear. But to accomplish the rumour problems, it will need to raise the rumour to become more important. For example, it should lift the rumour issue in the category of crime, serious disinformation or big data that is

attached to technological risk. This would bring the food rumours to be clearly seen that it is one of the problems in the society.

The last theme is the framework of science communication. Mostly, the debunking of rumours. The Consumer Empowerment Division, the government, focuses on strengthening online systems e.g. 'social media monitoring', developing the rumour search on the website and infographic content. They attempt to make the content accessible. The TV programme's framework is about designing the type of media that matches the audience. It assumes that the TV programme is more concerned about the people because the on-air time on mainstream media is a relatively high cost. If the content is in the appropriate type and reaches to the audience's preferences, it would raise the popularity of the TV programme. Likewise, the social influencer suggests to 'think about the general people' who are receiving the message, concerning its simplicity. The government framework rather develops the online system. They have organised and stocked up the debunking of rumours and other scientific content on their official website. The government framework is more systematic and bureaucratic. The social influencer and the TV programme focus on content creation. The social influencer always delivers their communication through the text, letting people read the digested information and accessible explanation. They have interacted with the public in the Facebook platform by responding to the comments or answering questions sent to their inbox. The TV programme pays full attention to the media type that matches to the content. The content is not always in one single type of media. Some should be in the infographic format while others could be videos. This is how mainstream media works on communication. The framework of

science communication can initially conclude that it is about the 'media type', its 'simplicity' and the 'channel'.

4.4.2 Defining Science Communication Model

The level of science communication engagement in Thailand could be regarded as low. Historically, Thai people have lived in peaceful environments, with low experience of actual fear of lives, e.g. natural disasters, drought or starving. A lot of people expect luck and rely on the supernatural, and they have Buddhism as the national religion in the country, even though the religion actually aims for people to think logically more than just belief. However, the connection of Buddhism with Thai people is carried by rites. Thus, Buddhism in Thailand has a lot more rites than core doctrines. Overall, the main mindset among Thai people is far from being scientifically based. They are more likely to 'believe' rather than 'find' if things are true.

Thailand is known as a great country of food resources, hence the proverb 'Nai-Nam-Mee-Pla-Nai-Na-Me-Kao' (we have fish in the river and rice in the farm'). Food is a part of Thai culture; if there is anything causing fear among Thais, food may well be the reason. As a result, food rumours on a social media platform should be a case study to examine the way Thai people engage in science communication. This is because it will show the confusion, fears and beliefs among people while representing communication from experts.

Science communication has been studied in various ways. Defining the stage of science communication from the food rumour study is not going to generalise the whole science communication situation in Thailand. It is regarded as another phenomenon from the period of the internet and social media.

The literature review describes four types of science communication: deficit, dialogue, lay expertise and the public participation model. The deficit model describes one-way communication from experts to the public. The dialogue model is about the exchanging of information between experts and the public, in two-way communication. Lay expertise aims to empower local communities and support local knowledge as scientific knowledge. The public participation model refers to the co-operation between the public and scientists, in high and active engagement.

Defining the stages of the science communication models in Thailand has to be well considered. From all the rumour debunking and the science content released from each sector, the communication between experts and the public fits into the first three models. Since social media is a tool for communication, it will automatically be two-way because the public are able to comment on posts. However, it has to be considered whether this is 'quality' two-way communication since the interaction between the content publisher and the audience may not really lead to further discussion.

For example, social influencers debunk rumours and the public later read and believe in it, without any other arguments. This should be in between the deficit and dialogue models. Even though the tools (social media platforms) allow scientists and the public to be well connected, the quality of discussion is not guaranteed in terms of truly 'exchanging information' between them. However, there was the case of fake seaweed that the public sent a sample to scientists to investigate in 2009. The results found that it was not fake. This can be called exchanging information. The deficit model seems to be an out of date form of

science communication literally from the theory. However, it does not cause any negative consequences if it helps to uncover some science-related issues. There are a number of seen but neglected rumours, e.g. lime and soda killing cancer cells, fake eggs, fake rice, etc. A lot of people unexpectedly believe in these since they somehow 'make sense'; imagine that 'the acid combined with the gas would potentially kill the cells'. In addition, Thailand has a huge market of imported and exported food with China. As China is having many issues with making fake stuffs, the fake food issues claimed, as in coming from China, should be true in this sense. Some people do not really have more knowledge to support them to think about the possibility of the issues being really true. The deficit model explains that the 'public do not have adequate science knowledge' and they are unable to address complicated issues. This definition is matched with the situation of rumours. People just believe in them if they are about health awareness.

Some claim that the deficit model is one-way communication. This statement is half false and half true. In the past, experts communicated one way to the public, through radio, television, newsletter or newspaper. If one-way communication means having no response from the audience, it was hard to know if the public wanted to respond to the experts because they could not communicate through mainstream media. There was a lack of a platform to communicate between scientists and the public. The chain email period was also a spontaneous one-way communication. People sent and received a lot of chain emails on various issues, including food and health. There were no online channels where people could verify the accuracy of messages. The period of social media has helped to increase the interaction among the public themselves, experts and the public, and the

government and the public, etc. It has brought out more actors and institutions to participate in online communication.

In terms of the above statement being half false, food rumour debunking communication is not always one-way communication – it can also become two-way. Debunking rumours is a part of science communication because it uses scientific logic and explanations, even though the public would not have exchanged information with scientists. However, they, at least, would eventually have adequate knowledge to deal with future rumours. Social influencers found that he/she receives a lower amount of the same old food rumours after having communicated over four years. There are more people who know the truth, and they can help spread the word to others. The one-way (deficit model) or two-way (dialogue model) communication would not mean two actors are communicating. The truer understandings or changed beliefs or behaviours from the audience there are, the more successful two-way communication on debunking rumours is.

The lay expertise model can also apply in the case of the Greenery Foundation. This model attempts to empower local knowledge as scientific knowledge. Greenery is not a local community, but one of the projects from the Thai Health Promotion Foundation.

However, they target participants living in urban areas from the ages of 25 to 35. This is because this group of people are working men and women. They have their own income, suggesting that they will have freedom of choice. Greenery then assumes that this group of people would prefer a better quality of life. The lay expertise model, conversely, brings local knowledge into scientific knowledge. In the case of Greenery, the knowledge of food safety may actually come from the

local area, where people live with nature, growing their own ingredients and consuming natural food. Greenery is the mediator transferring this knowledge to urban communities. They, as a result, empower the urban community.

Science communication in Thailand has also academically developed. The Council of Science Dean of Thailand has attempted to develop scientists in human resources by communication skills training on social media. The aim has been to 'educate' society with 'lifelong learning' – transferring knowledge and understandings starting from secondary school children. This roots the science environment in society. The communication training means science communication in both forward and backward terms. The forward terms mean that the Council of Science Dean attempts to add the true skills of communication into academics for them to become science communicators. However, it could be considered that communication skills from academics needs to be developed – the deficit model that claims to be one-way communication from experts to the public should not truly exist. As a result, the extent of what the Council of Science Dean should do should not go beyond the deficit model. If the training becomes more successful, the academics would turn into 'trained personal media', building a friendly science environment and understanding what the public needs. Once the public can access and learn science knowledge, they would be able to develop their discussion skills and have two-way communication. Along with developing the mediator, it should encourage people to think or analyse from the empirical and reliable evidence as a scientific process does. The internet and social media platforms are one tool offered.

Overall, science communication in Thailand is not a definite fit in the one model – it depends on the organisation. Some organisations are about communicating with the public and not expecting a response. This then seems to be one-way communication. Meanwhile the communication from a person, academic or social influencer, using social media as a main platform, should see more of a response and interaction with the audiences. The social media platform does support two-way communication. However, the quality of communication sometimes has to be considered as to whether it is worth calling it two-way. There is a sector which has targeted participants that seem to fit in the model of lay expertise since they have built and empowered their own communities. To conclude, science communication models in Thailand are in between the models of deficit and dialogue and are lay expertise.

4.4.3 Is the Deficit Model Implicit in Thailand?

If considering whether the communication from each sector can establish science communication, they do. This is because debunking rumours mostly uses scientific explanations, even if simple. The rumours of food and health, for example, eating something and expecting to fight cancer treatment, are not possible now. The debunking has explained the correct way to treat cancer and the negative effects to the body if continuing to eat something. Both rumour debunking encourages people to understand the dynamics of science. However, if regarding science as the scientific course, debunking rumours would not establish science. As Lewenstein (2003) found, knowledge is anything related to everyday lives. If testing the public about factual questions, they are still unable to answer questions, following the research of collecting public understanding of science for

25 years. Lewenstien (2003) then concluded that the deficit model is not successful in terms of science communication.

Arguably, the deficit model would be implicit if we regarded scientific knowledge as knowing more about science, not strictly in terms of scientific course. Bransford (2000) said that people can learn best if the facts and theories mean something to their lives. Connecting people with scientific knowledge can start from communicating issues that link with their everyday lives. As a result, people would know more about science and the issues of food rumours. They would know the truth and remove the false knowledge. The model should not work if communicating science as scientific knowledge. However, knowing, understanding, and respecting the public would encourage successful communication in the deficit model.

The National Academies of Science (2016) report explained that the deficit model is wrong and unable to identify what audiences need. The report argued that audiences may already understand as scientists, but they do not agree for certain reasons. If applying the deficit model as a method to identify what audiences need, it would, not surprisingly, be a failing method because the model is what scientists communicate variously to the public. The deficit model literally is a traditional way of science communication. It would somehow be regarded as what scientists want to communicate. That is why it fails to identify what the public needs; as a result, identifying what the audience needs is not included in the deficit model.

The report explained that science communication does not always go directly from scientists to audiences, but rather it will pass through the media, organisations or other sectors. It is true that it is not 'always direct communication

to the audience'. However, the social media platform allows much higher chances for scientists to communicate directly with the public, both by public posts and individual messages. Even if a message is distorted, it is currently much easier to track its original from old posts on social media. Even if it is communicated directly, people would interpret it differently based on their existing knowledge and experiences. Social media allows the direct communication between communicator and the audience; however, the audience will still select their preferred communicator.

The last point from the report said that focusing science knowledge is not enough to achieve communication goals. It is true that communicating purely in science knowledge would not be successful because the public would not understand science as scientists. This model is insufficient to encourage people to make any decision or take action. This point is partly right if applying the deficit model to traditional science communication where people cannot make decisions on science issues. The debunking communication would, at least, change the beliefs in the audience, even if it would not achieve communication goals as expected. It would lead to a change in perception and behaviour, and increased science knowledge connecting to what the audience are curious about.

Overall, finding out whether debunking food rumours establishes more science communication is based on the way science communication is regarded. The definition of the deficit model was considered in the broad sense where scientists had to educate the public to understand science and later take action on science-related issues. It is not surprising that it seems to be unsuccessful. If considering the science communication model as being step by step, the deficit model is a first

step of communication, allowing scientists to begin the communication with the public. It does not matter if the public would understand because it is a starting point to learn from each other. The food rumour case is the bridge which connects the curiosity from the public and the explanations from the scientists. To conclude, the debunking of food rumours has established more science communication because it makes scientists, the government and the media communicate more science to the public. The social media platform is one of the key points establishing the communication.

4.4.4 Is Communication Science in Thailand Regarded as a Success?

The success of science communication is subjective. Each organisation has different perspectives of what is achieved in the communication goals. The government, social influencers, the mainstream media and NGOs have different focuses on issues to communicate and sometimes use different media due to the targeted participants.

Among all the government sectors, the consumer empowerment division under the FDA works close to food issues the most, focusing on food safety, food and dietary supplements and exaggerated advertisements. Both social influencers and the mainstream media do not have any specific issues to be responsible for. They generally underline any issues about everyday life.

The consumer empowerment division state that they are still not satisfied in what they are doing. They found that there are other online sites that reach more views from the public. Their communication still has a gap to be filled. Since they are situated under a bureaucratic process, this means that the flow of releasing any communication will take more time than other sectors. They understand that Thai

people are likely to read informal language and less academic content, while they need to maintain decent character. They are moderately satisfied, with some content having positive feedback.

The social influencer is obviously working on debunking food rumours. He considered himself as a moderate success, with a lower number of people asking him about previous debunked food rumours. Some people are able to tell the truth of those rumours to other people. The number of food rumour issues is lower than before but there are still new issues emerging. However, he realised that his voice does not have as much impact as the government or the mainstream media. Once the government speaks, it quickly helps to decrease the panic among the public.

Since the Sure-Korn-Share TV programme has been on air, from 2015, they have further collaborated with other partners and extended their community with the Office of the Thai Media Fund. They have run workshops and events and released an e-book about fake news. They have joined the network called 'First-Draft' to continue to solve the problem of unreliable online information. The TV host of the Sure-Korn-Share programme said that the ideal success would be that there is no longer a need to broadcast this TV programme. The TV host considered that it has been successful at certain points. The wording 'Sure before Share' has impacted on society as it is a good call for action. The outcomes show that some audiences have changed their behaviour. Some of them asking about rumours will get answers about those issues. We used to encourage them to search for the answer; however, it is not easy for people to approach scientific evidence because the shared information is sometimes very complicated. Some issues require five or six

journalists to search, analyse and process the information before delivering to people. That is why it would be difficult for the public to find out on their own.

Overall, each organisation has different points of success in science communication. The government and the TV programme estimate a broad framework. The government expects to have more views and followers on their websites. They are attempting to extend their communication while filling a gap in their communication. The social influencer does not take the number of views or shares as a priority. Instead, he continues debating and debunking the issues that he disagrees with. He then does not have proper assessment of the feedback. However, he notices that fewer people ask about previous food rumours. The TV programme seems to be the most successful sector since they have full freedom to develop the programme. Apart from airing on TV, they also have social media channels and additional media partners to extend the campaign about fake news. Judging the success is challenging because you cannot really have the same assessment of different types of sectors. However, there is more communication about science when talking about fake food news in both online and offline media. Some Thai online users have become aware of the fake news of food. That should be enough to say that the communication of science in Thailand has initially been successful.

4.5 Conclusion

This chapter collected 21 in-depth interviews about the way related sectors, including the government, NGOs, media agencies, private sectors, academics and social influencers, deal with food rumour and communicate science. All of the interviewed organisations have communicated science in various ways, but three

organisations have worked on rumour debunking: the consumer empowerment division, Sure before Share (TV programme) and social influencers (Dr Jessada). All of the information has been analysed and synthesised into the stage of the science communication model. Science communication in this context considered the interaction between the communicator and the public because the internet and social media support direct communication.

The consumer empowerment division has run its content on all popular social media. They have their official and unofficial websites and social media: Facebook, YouTube, Twitter and a smartphone application. Their content includes rumour debunking and issues about food, health and cosmetics. They collaborate with social influencers, making video clips talking about health rumours. The division also runs activities in schools to educate students about food and health safety. The Sure-Korn-Share TV programme debunks online rumours on many issues, having had around 560 stories on health and 397 about food since it has been on air from 2015. The TV host acts as the person who reads the news from a smartphone and finds answers from the experts for the public. A social influencer (Dr Jessada) has used his Facebook account to debunk rumours by publishing his content with the signature of (X) or (?) on the rumour issues and adding his explanations. The other sectors have also developed sections about checking online shared information. Manager Online has a section called 'hot share'. The Society of News Providers Association has a section called sure-laew-share-dai (this is sure, you can share it) on its website. This is the extent to which the organisation attempts to go against online rumours. Besides, Drama Addict, another social influencer, often communicates about medical issues. The Council

of Thailand Dean has trained some science lecturers to become professional science communicators in the future. The National Cancer Institute has developed a smartphone application to do with cancer since most of the food rumours are about food and cancer treatment. Greenery is one of the projects that supports the concept of 'eat good, live green', running green market activities for urban people.

The most used media are infographics because they always come in single pictures with less amounts of text, enough to understand briefly and inexpensively. They have been used in both governmental and non-government organisations. The video clip has more impact but costs more. However, the mainstream media found that the unofficial Facebook live video using a smartphone gained a higher number of views than the official one using professional equipment.

Previous studies of science communication in Thailand found that successful science communication has to connect with everyday life issues and use common language. They studied printed media and science TV programmes in the past. The results showed that the printed media combined science sections mainly with topics about mobiles and technology, not intensive topics about science because the topic had to be for the masses. The most impactful media is personal media; however, it involves a skilled person, or someone in a reliable position. There is an online science community at Pantip.com allowing anyone to talk about science on any issue. This WebBoard community is still running now.

There are four points about defining the science communication model in Thailand. Firstly, the communication from experts is obviously a deficit model because the communication used to be on a one-sided platform, e.g. radio,

television or chain email. The public had no room to respond to it. The deficit model seems to be regarded as a failing method to communicate science; however, it does not matter if it helps uncover any issues that the public are curious about. It is a first stage of communication to educate people. The deficit model is regarded as old fashioned in science communication. However, it made a positive development of science communication in Thailand. With the social media platform, the communicator can also see the public's response.

Second, the communication in social media is clearly in the dialogue model, allowing the exchanging of information and discussion. However, the response from the public somehow does not lead to a quality discussion with experts. They rather acknowledge what scientists say. There were some issues where people sent the food samples to scientists to investigate. This clearly shows the dialogue model. Third, the lay expertise model applies in the Greenery project since it is a build-up plan to promote the knowledge of food safety, having communication and regular workshops. They even targeted urban people, showing that they have their own expertise and knowledge in their community to support food safety.

Fourth, The Council of Science Dean of Thailand has trained science lecturers to develop skills of communication. This shows that the development of science communicators in Thailand is still in progress. Debunking food rumours establishes more science communication by far in Thailand because it is the platform that is freely open to any communicators. Meanwhile, it encourages the government and the mainstream media to take action over it. They have established more online tools, while other organisations have started to have sections about online shared information. Science communication from

debunking rumours is far from science communication where scientists talk about their research. However, it is clear communication between communicators and the public. It does not highly increase pure science knowledge, but it encourages the public to be aware of online information. It raises their interest about science issues that are connected to their lives.

This chapter represents the way some related stakeholders debunk rumours and all of them are communicating science or publishing science content. The results do contradict my assumption that the government would not pay much attention to the debunking of food rumours. They have shown that they are in all of the effective online platforms, regularly publishing science content despite working under a strict policy framework. The rest of the interviewees work differently according to their type of media. Social influencers would rely on social media to be able to debunk many food rumours while the TV programme has to design the content as a video clip. Academics support the training of scientists to become effective communicators. Even though the work of debunking rumours is not well collaborated amongst sectors, we can see that they are all taking action against the false information in their own ways. We presented the rumour context in Chapter 2 and the aspects of experts in this Chapter. The next empirical chapter is moving to investigate trust among people, as social media users, with the rumours and the debunkers, the government, and the social influencers.

4.6 Limitations

The interviewees in this study are various because the food rumours relate to several issues; food, health, media and science knowledge. I tried to interview relevant people and organisations to support the analysis. However, most of them

have less engagement with disinformation compared to these three interviewees: social influencers, the consumer empowerment division, and the Sure-Before-Share TV programme. The interview questions have been adapted according to the other interviewees to make the interview flow. Some questions, as a result, have not been included in the analysis because they do not represent an obvious engagement to the study. This also affects the analysis on finding more similar points made about food rumour solutions. Some organisations work on food, but they are working on actual food safety not food hoaxes. The point gained from the interview could not provide much support, compared to the expectation. This would lead me to assume that there is a bias on my interview questions and interviewee choices. Due to the time allowance for fieldwork and the interview meetings that were arranged, the completed interviews are the best they can be. However, it would be preferable to interview more organisations working on online information.

The interview questions should have been revised more because there are several missing points that were needed, for example, the questions about science communication on debunking rumours and how different interviewees think about the engagement from the public about science. The deficit model argues that the communication is a top-down because the experts always need to inform the public. However, the social media platform would have changed the direction of communication. It is doubted that the experts could view this differently. This would help the analysis to have more strength.

The situation of food rumours has already reached its peak since it is noticeable that more people are sceptical. Some old food rumours do not affect people's belief

that much. However, new rumours are still being released, but it would be another type of rumour or about a different subject, according to the current situation in the society.

Chapter 5

Trust and the Experimental Survey

5.1 Introduction

This chapter builds on the previous results, as we have explored the features of rumours in chapter 3 and the science communication activities of related stakeholders in chapter 4. It aims to complete the last part of the study by testing the hypotheses about trust in rumours and trust in communication within the Thai population. The Kantar TNS company reported that 40% of Thai people believe in information from social media, higher than other countries at 35%. This percentage is also higher than Japan (18%) and Korea (17%), even though these countries have had digital communication for longer than Thailand (Bangkok Post, 2017). This statistic is parallel to the attitudes of some organisations: ‘Thai people easily believe in advertisements’ (the Bureau of Food Safety Extension and Support, 2017, 19 Dec); the NGO Greenery agrees that ‘senior and rural people’ tend to believe in rumours more.

This chapter will answer the last research question: ‘In what ways do online users trust rumours and debunkers?’ An experimental survey is conducted to test trust in dread and wish rumours, and trust in the government and social influencers. The literature review discussed that trust refers to whether accurate, objective and complete information is provided that helps the communicator build competence and honesty, as well as give true and reliable messages (Ren and Levine, 1991). There was a question raised by Weingart and Guenther (2016) about the main communicators, their specific interests and media sources to be trusted. They found that media communicators do not deserve the same level of trust as others. This is because the perception towards different communicators

varies. For example, the government or politicians hide agendas, such as the legitimacy of expenditure for technological projects, while less support is given for the public's interest in science. People then see politicians as being less trustworthy than academics because they see academics as a group delivering accurate information. There has been research that surveyed British citizens about trusted sources in environmental issues. The most trusted sources were university scientists and environmental organisations (Bickerstaff et al., 2008). However, the choice of communicators continually increases because of the growth of online platforms. A science communicator can be anyone who is able to deliver approachable science knowledge. This means that complicated information is sometimes interpreted into easy-to-understand knowledge for the public. These types of communicators are likely to receive higher trust because they work closely with the public. Although previous research has found that the government receives less trust due to supposed hidden agendas, their communication is still valid and verified, especially when reporting rapid disease.

There are three main discussions in this thesis overall. The first concerned content analysis and food rumour, and the second discussed the communication of science and the debunking of rumours. The last research question aims to measure trust among social media users towards original food rumour messages and debunked versions of two kinds of communicator, the government and social influencers, using an experimental survey. Since there are plenty of food rumours that are debunked, the survey selects two rumours, debunked by both the government and social influencers. The rumours in this experiment were real issues from 2013 to 2016. They were highly discussed among the government, social influencers and the public during that period. It is assumed that people who

have not heard a rumour and people who have, trust in different ways. The two rumours in this study are soursop being used for cancer treatment, and fake eggs, wish and dread rumours respectively. Soursop as a cancer treatment is a widely controversial issue. This is claimed to be a successful cancer treatment (Thairath, 2015), and there are a lot of soursop leaves sold in the market as a result. Many cancer patients refuse to go to hospital, but they chose to just eat the leaves. Scientists and academics have attempted to provide information about its strong hazards. They have found that cancer patients' symptoms became worse because of eating soursop. Likewise, fake eggs have been claimed to truly exist, being imported from China (Thairath, 2009). These two rumours are suitable to use in the survey as they can be regarded as true and false at the same time.

The experiment is carried out by giving people in the sample one out of the four debunked messages to read. Two out of the four debunked messages are the original statements sourced from social influencers and the government, while the other two are experimental messages, swapping the content and source. For example, the wording will be the original from the social influencer, but the source will be inserted as the government, and vice versa. This will give a clear picture as to the ways people in the sample trust rumours and communicators similarly and differently. If debunked messages from the government are selected as trustworthy, this will prove that they are still trusted by the public, while social influencers are new actors gaining a lot of attention. The communication from these two kinds of actors is about decreasing the misunderstandings resulting from false rumours. Convenience sampling is used, aiming to gain perspectives from Thai people who have Facebook accounts.

The chapter will begin with the concept of trust, extending from the literature review, and will be followed by the development of the experimental survey, the results, an analysis, and a conclusion.

5.2 The Concept of Trust

Since online social networks are the platforms that produce false and misleading information that then creates uncertainty, trust is the key to reducing this uncertainty, and the complexity of exchanges and relationships (Grabner-Krauter, 2002; Luhman, 1989).

Trust has a wide range of aspects. In sociology terms, Coleman (1990) stated that placing trustworthiness on group members will lead to success more than not doing so, having observed a farming community where a farmer received his hay baled and allowed his farm tools to be borrowed, showing that the physical capital was reduced. This definition of trust includes *honesty* as part of it, where the farmer's tools were lent. This matches the study of Haung (2007), indicating that some people gain more trust than others because they help people without gaining personal benefits. This example also reflects the aspects of *social relations*, where trustors and trustees share similar values (Ashley et al., 2011).

In relation to this, Simmel defined trust as 'a state of mind that has nothing to do with knowledge which is both less and more than knowledge' (Simmel, 1907: 179). Arguably, trust in rumours and their debunking has to deal with science and health knowledge. It relates to food rumours in the understanding of scientific logic. For example, some wish food rumours have been claimed to be inventions of health treatments, whereas, the responsive messages from debunkers have attempted to argue against these creations. This, therefore, means that food

rumour issues are literally dealing with a battle of knowledge. Viewing trust in the dimension of knowledge can be found in Peters et al. (1990), who suggests three dimensions of trust: knowledge and expertise, openness and honesty, and concern and care. The point of *knowledge and expertise* shows the issue of trust of information on highly technical issues from experts in the contemporary risk society (Ashley et al., 2011). When knowledge about risk issues is low, the reliance on trust becomes more critical (Siegrist and Cvetkovich, 2000). Investing in complex technology such as nanotechnologies in society needs to gain trust because it is a key predictor to drive society development (Ashley et al., 2011). Thus, trust is also the process between the relations between individuals that reduces uncertainty and complexity (Allum, 2005). One places their trust on another because that person is capable of covering the complicated issue.

Openness and honesty are essential elements of trust. This is seen in Covello (1993), who defines trust through four elements: caring and empathy, dedication and commitment, competence and expertise, and honesty and openness. Openness and honesty represent their meanings themselves. People will grant their trust once the trustor has shown transparency and honesty. Another component is *concern and care*. These two aspects are a broad dimension of other components of trust: commitment to goals, fairness, faith for goodwill, honesty and openness (Allum, 2007). This component is also in the form of affective trust (Johnson-George and Swap, 1982), which is tied to emotion (Sekhon et al., 2014). However, concern and care can also be less emotionally attached. Instead, people who decide to encounter social issues without personal benefits show that they have concern and care for others, and this helps them to gain trust.

In terms of the situation of misinformation about food, trust is linked to risk and uncertainty, as food is an essential element of everyday life. Trust has been linked with the domain of risk perception as a state variable, non-specific variables, e.g. most people and strangers, as well as trait variables (Rotter, 1980; Yamagishi, 1988; Yamagishi and Yamagishi, 1994). Most risk perception and general trust studies have been conducted out of interest (Siegrist and Gutscher, 2005). The term social trust is even closer to the issue of food rumours, and is defined as ‘...the willingness to rely on those who have the responsibility for making decisions and taking actions related to the management of technology, the environment, medicine, or other realms of public health and safety...’ (Siegrist, Cvetkovich and Roth, 2000: 354). It is hard to create social trust between experts and the public in the real world (Cvetkovich et al., 2002); however, the communication between social media users and experts in food rumour issues could be a possible example. It has clearly represented the interaction from social media. The issues of food rumours are in a gap of public attention. They sometimes become news in the mainstream media, while they are tiny issues discussed in certain groups. This means that whether issues are important or not depends on whether someone has considered them. Due to the number of rumours in social media, it is hardly likely that all of them have been officially proven by the government. This leads to the question of where people can seek the truth. One of the possibilities is asking experts. The issues of food rumours obviously relate to health and safety, but do not currently have an official institution working on them. However, people need to seek those who can verify them. The problems with verifying information is currently challenging because they come with changes in information technology.

Social trust, in this context, is more about actors who are able to take actions, and not leave existing issues. This will then grant people trust.

Strange claims about food also cause feelings of uncertainty among people as it is a risk to consume certain foods expecting the result of successful treatment. It is possible to evaluate risk if people have sufficient information. If information is inadequate, they have to trust experts to see if it is reliable (Siegrist and Cvetkovich, 2000). The problem is that information on social media is unable to be verified with regard to its reliability. People trust unreliable information thinking it is reliable because of the sources: the senders or publishers. Likewise, the style of presentation makes messages seem trustworthy for social media users.

The study of trust is complex, and it is difficult to extract essential features. For the study of trust in food, there is a link between food scares and the perception of risk, as seen in Greffeo et al. (2004), comparing the role of trust and the attitude of the purpose of buying food under the situation of food hazard. They described trust generated from a 'natural predisposition' to be trusting towards others through three elements: competence, benevolence and shared values (ibid, 2004: 321). Interestingly, they also examined the 'perception of the truth' because people assume the government will provide them with all the necessary information during a food scare crisis in order to make a safe decision to buy food.

As other actors also deliver information, the perception of truth is not just about the government. There are also social influencers who use social media as their major channel of communication. The content itself is sometimes enough to induce people to trust. Dealing with this problem by systematically controlling the

amount of rumour would be very challenging. Rather, communication is key to reducing misunderstanding from food rumours. Having information from more than one side helps people to consider what to consume and what not to.

5.3 Developing the Experimental Survey

The experimental survey aimed to measure trust in dread and wish food rumours and the two debunkers: the social influencer and the government. There were two main parts of the survey. The first part questioned respondents about their trust in rumours and the second was the experiment to measure trust in different communicators. The experimental method adjusted one aspect of the situation and compared it without modification (Neuman, 2011).

For the first part, it was decided to use two controversial types of food rumour: wish and dread – soursop for the treatment of cancer and fake eggs. Both types of rumour affect the perceptions of online users. Wish rumours give a sense of hope for recovering from sickness, while dread rumours cause fear in terms of consuming certain foods. Soursop for the treatment of cancer is about the claim that drinking soursop kills cancer. This rumour has become widely known in the public, and soursop has been popularly sold on markets and online. Soursop has been extensively reported online by a well-known Thai host since 2013. The issues have been about the potential of soursop for cancer treatment. The stories began with: ‘Soursop contains a substance for killing cancer cells’ (Thairath, 2013), ‘Investigating soursop in killing cancer cells’ (Thairath, 2014), ‘Unbelievable! Soursop can cure cancer’ (Thairath, 2015a) and ‘Soursop becoming popular: Cambodia imports to sell in Thailand’ (Thairath, 2015b). Later, in July

2015, a doctor warned that boiling soursop to drink could lead to death (Thairath, 2015c).

On the other hand, the issue of fake food obviously provides a feeling of fear. Thus, the selected dread rumour was about fake eggs because this has been controversial in Thai rural areas. The fake egg issue was reported during 2009 and 2010 in the Thai mainstream media. For example, there were headlines such as: 'Tricky China made fake eggs for under the cost of 1p' (Thairath, 2009a), 'High investigation to ban imported fake eggs into Thailand' (Thairath, 2009b) and 'Thai border market chaos! Sending eggs for investigation' (Thairath, 2010). The issue actually continued, until 2016, when there was news reported that science experts had suggested that fake eggs covered with plastic did not truly exist (Thairath, 2016b).

The two selected foods obviously link to common issues that people are concerned about. No one wants to have cancer, while patients want to recover from it. Eggs are a basic food that appear in most households, and a rumour to scare people must be related to something well-known or, at least, attached to everyday lives.

The dependent variable was trust in the information and the communicator. This part aimed to measure the extent to which the communicator or the wording impacts on the level of trust. The experiment modified 'the communicator' (message source) and 'the wording' (message style) and compared these to unmodified versions. The results represented whether respondents relied on wording or source.

Even though there are other organisations related to misinformation about food in Thailand, social influencers and the government are the most outstanding ones who communicate with the public about this issue; thus, these have been selected. The hypotheses of the survey were issued in three themes: messages, sources of content of communicators, and prior knowledge leading to trust.

5.3.1 Hypotheses and Testing

There were two main sets of hypotheses to test trust in original rumour messages from different communicators (social influencers and the government), and there were similar hypothesis frameworks for both types of rumour: wish and dread. I predict that the social influencer's communication would earn more trust than the government's because he communicates more responsively to the public than the government does. He answers private messages sent to him. His communication is more organic than systematic. The hypotheses are presented diagrammatically below.



The first set of hypotheses was about testing people in terms of whether rumours could be trusted and if they were influenced by two independent variables: knowing about the rumour beforehand and thoughts about the rumour. This was developed from the current situation where the growth of the use of social media means that people are more exposed to a wider range of unverified information.

In the study of Fox and Duggan (2013), it was found that one - third of US teenagers use the internet to diagnose their health concerns (Fox and Duggan, 2013). Likewise, the internet has become the centre of information seeking, and social media is where this information is shared. Jin (2016) insisted that online knowledge sharing is the most salient behaviour that maintains and develops online communities. Trusting rumours would represent the impact of messages and their sources as well as the prior knowledge of people about food and science issues.

Hypothesis 1: People who do not know about a rumour will trust in it more than people who know about it or know partially.

Hypothesis 2: People who think that a rumour is true are likely to trust it more than people who do not agree with it or are unsure.

The second set of hypotheses is within the experiment – critically testing social influencers’ and the government’s effects on trust. This developed from the concept that people trust senders but not necessarily the messages. Friends and family will also be regarded as trusted sources when sharing political rumours (Groshek and Bronda, 2016) and in risk communication (Harvey and Twyman, 2007). Thus, sources of content and communicators are key to trust. Following on from the previous study that the government received the least trust from people on the issues of risk, people are likely to trust scientists, academics or experts. For example, technological issues like developing nuclear power technology are too complicated for laypeople. These people decide to leave decisions about this technology to the experts, and they assume that the government will not provide them with all of the information, in other words, social trust.

Under the issue of rumours about food, social influencers are the actors who play a huge role in debunking messages. They are also former doctors and science academics and have a number of followers. They have grappled with this problem since before the government started to consider it. Given that they are users of social media, they have no rules in their communication, while the government has a process of publishing any statements. However, as the government occupies the authority of traditional media, they still have channels to make their communication impactful. It is seen that political rumours have the potential to induce people to believe, with attractive words and signs, and the content's presentation. This often happens in times of crisis and uncertainty, and information is spread considerably in a short period of time (Berlinsky, 2012). Silverman and Singer-Vine (2016) found that in the US election in 2016, many people who saw fake news stated that they believed in it. However, there are actually other factors leading to belief in political rumours. For example, some people have their own biases and preferences in politics; they are ready to believe in the information that matches their attitudes or perceptions. Food rumours, unlike political ones, are not divided by preferences, which can make anyone believe in them. Both dread and wish food rumours mostly contain scientific logic, strong words and headlines, and text signs, as well as referring to experts or institutions.

Hypothesis 3: People trust official messages from social influencers more than the government.

Hypothesis 4: People trust in social influencers as communicators more than the government.

Hypothesis 5: All groups of people are likely to trust in social influencers more than the government.

Hypothesis 6: The message styles have different effects on trust when they come from different sources – the government or social influencers.

5.3.2 Survey Structure

The methodology used in this chapter was the experimental survey, created through Qualtrics. The diagram below shows the structure of the survey having 13 questions with main three sections; wish rumour (questions 1-4), dread rumour (questions 5-8) and socio-economic questions (questions 9-13).

- Q1** • **Do you know the story of soursop and cancer treatment?** (Yes/No/Partially)
- Q2** • **What do you think about curing cancer by soursop?** (It is able to cure it/It cannot cure it/I am not sure about it)
- Q3** • **Read the original food (wish rumour) story and answer the questions** (rate the 5 trust scale from strongly agree to strongly disagree) - *See Figure 5.1 and Table 5.1*
- Q4** • **Experimental Questions** - Participant will be randomised to read one of the four debunking messages and rate the trust scale. The first two were original from social influencer and the government. The other two are the 'swapped' version between message and sources - *See Table 5.2 & 5.3*
- Q5** • **Do you know the story about fake eggs?** (Yes/No/Partially)
- Q6** • **What do you think about fake eggs?** (True/False/Not sure)
- Q7** • **Read the original food (dread rumour) story and answer the questions** (rate the 5 trust scale from strongly agree to strongly disagree) - *See Figure 5.2 and Table 5.5*
- Q8** • **Experimental Questions** - Participant will be randomised to read one of the four debunking messages and rate the trust scale. The first two were original from social influencer and the government. The other two is the 'swapped' version between message and sources - *See Table 5.6 and 5.7*
- Q9-11** • **Gender** (Male/Female)
• **Age**
• **Educational level** (Less than high school/Junior high school/Senior high school/Bachelor degree/Master degree/Doctoral degree)
- Q12** • **How long do you spend on Facebook each day?** (Below one hour/Between one and three hours/Between four and six hours/Between seven and nine hours/Between ten and 12 hours/More than 12 hours)
- Q13** • **How often have you seen information about food and science on Facebook?** (Never/Seldom/Sometimes/Frequently/Always)

Figure 5.1

Soursop and the cancer treatment, Thai alternative medicine.

There is a report from Thai Alternative Medicine (2014) about Soursop has special qualities that helps cure sickness, especially cancer. There are a lot of studies about preventing the cancer cells, also the texture of soursop are full of nutrients and vitamins such as carbohydrate, fructose, pectin, vitamin C, vitamin B1 and B2. The potassium in soursop provides a wide range of curing as same as medicine for infection of bacteria.

1.The extract from soursop has its effectiveness to kill 12 types of cancer cells; colorectal cancer, breast cancer, lung cancer etc.

2.The elements of soursop has proved that it has over 10,000 times to reduce the growth of cancer cells causing the slow the growth of cancer cell, beyonding chemotherapy or Adriamycin, the normal cancer medicine.

3. The extracts from the soursop selects to kill cancer cells only. It is not harmful to normal cells in the body. The other parts of soursop including skin, leaf, seeds have been used for ages by the local doctor and natives in Latin America. They used in curing heart diseases, asthma, arthritis.

Sources, Thai alternative medicine (2557), Soursop aganist cancer better than chemo, Bangkok, (printing company) 66-72

The Original Message of Wish Rumour

Table 5.1: The set of questions of trust after reading the original rumour message

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
Q 3.1 After reading this, I trust the information that Thai Alternative Medicine provided.					
Q 3.2 After reading this information, I would like to share it on social media.					
Q 3.3 After reading this, I think the information is convincing.					
Q 3.4 After reading this information, I think it is logical.					
Q 3.5 After reading this information, I think its message supports what I have believed.					

Table 5.2: The set of randomised messages of wish rumour

Message 1	<p>In response to this statement, a science lecturer at Chulalongkorn University, who is also a science social influencer, said that extracts from soursop are harmful to the nerves and kidneys.</p> <p>Even though soursop can be developed into cancer medicine or cooperate with chemotherapy in the future, studies have found that the 'annonacin' in it is poisonous to nerves. Moreover, research studies in Ghana also found that a mouse that received a large amount of extracts from soursop had effects on its kidney. Thus, to use soursop to kill cancer effectively and safely still requires a lot of further studies, such as of the process of killing the original cancer cells, communication within the cells, the controlling of standard toxicology and safety.</p>
Message 2	<p>In response to this statement, the Department of Medical Science at the Ministry of Public Health said that it is clear that the trend of eating soursop to kill cancer is not true. It is not 100% safe and also has side effects.</p> <p>International research found that extracts from soursop had anti-oxidants. These can kill cancer cells, such as in breast, lung and skin cancers. However, soursop also has its toxins. The studies found that a mouse that received soursop extracts had effects on its kidney.</p> <p>Thus, it is not appropriate to consume soursop to kill cancer. Once the elements that kill cancer and those that harm the nerves are divided, it will be safe to consume it.</p>
Message 3 (treatment group)	<p><i>In response to this statement, the Department of Medical Science at the Ministry of Public Health</i> said that extracts from soursop are harmful to the nerves and kidneys.</p> <p>Even though soursop can be developed into cancer medicine or cooperate with chemotherapy in the future, studies have found that the 'annonacin' in it is poisonous to nerves. Moreover, the research studies in Ghana also found that a mouse that received a large amount of extracts from soursop had effects on its kidney. Thus, to use soursop to kill cancer effectively and safely still requires a lot of further studies, such as the process of killing the original cancer cells, communication within the cells, the controlling of standard toxicology and safety.</p>
Message 4 (treatment group)	<p><i>In response to this statement, a science lecturer at Chulalongkorn University, who is also science social influencer,</i> said that it is clear that the trend of eating soursop to kill cancer is not true. It is not 100% safe and also has side effects.</p> <p>International research found that extracts from soursop had anti-oxidants. These can kill cancer cells, such as in breast, lung and skin cancers. However, soursop has its toxins. The studies found that a mouse that received soursop extracts had effects on its kidney.</p> <p>Thus, it is not appropriate the consume soursop to kill cancer. Once the elements that kill cancer and those that harm the nerves are divided, it will be safe to consume it.</p>

Table 5.3 The set of questions of trust after reading one of the debunking messages of wish rumour

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
After reading this, I trust the information that Thai Alternative Medicine provided.					
After reading this information, I would like to share it on social media.					
After reading this information, I think it is convincing.					
After reading this information, I think it is logical.					
After reading this information, I think its message supports what I have believed.					
I think the science social influencers/the government have a good understanding of the cancer treatment.					
I think the science social influencers/the government usually speak honestly to the public.					
I think I share similar values to the science social influencers/the government about the cancer treatment.					

Figure 5.2

Nation TV - <http://www.nationtv.tv/main/content/378489367/>

Chiang Rai - 12 February 2016, Ms Ratchanee Chobjit, Scientist Teacher and her student was conducted an experiment of eggs after found it is fake. From the experiment, the eggs show different chemical effect compared to real eggs. The yolk in real eggs is still in the shaped of oval but the yolk in the fake eggs cannot stay in its oval shape.

The teacher explains that the eggs was not natural made rather it processed with the chemical, making it look like real. The students have bought it from the local food truck. Their family also uses it for cooking and later they found the texture looks like a powder. Overall, they suggested that it is fake. Teacher and students are scared to eat it.

Later, the staff of local health support from Chaing Rai has collected the eggs to test in the lab. The result will be announced next week.

The Original Message of Wish Rumour

Table 5.4: The set of questions of trust after reading original dread rumour message

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
After reading this, I trust the information that Thai Alternative Medicine provided.					
After reading this information, I would like to share it on social media.					
After reading this information, I think it is convincing.					
After reading this information, I think it is logical.					
After reading this information, I think its message supports what I have believed.					

Table 5.5: The sets of randomised messages of dread rumour

Message 5	In response to the statement, the owner of a science and health Facebook fan page said about fake eggs that, following a number of shares, they are not fake. All the qualities mentioned are in the anatomy of eggs, and are normal. The eggs that set well are the good quality ones, which are able to be eaten raw. The fake eggs story has been a rumour for a long time. If someone would like to produce them, a high level of technology would be required to earn the profits.
Message 6	In response to this statement, the Minister of Public Health said that there are fake eggs from China sold illegally in the market. It has to be stated that the composition of fake eggs does not provide any benefits for health, and will be harmful from their chemicals. The inspection of fake eggs is being processed by the network of local public administration, including local and imported eggs. After random inspection on the market, no fake eggs have been found.
Message 7 (treatment group)	<i>In response to this statement, the Minister of Public Health</i> said that, following a number of shares, they are not fake eggs. All the qualities mentioned are in the anatomy of eggs, and are normal. The eggs that set well are the good quality ones, which are able to be eaten raw. The fake eggs story has been a rumour for a long time. If someone would like to produce them, a high level of technology would be required to earn the profits.
Message 8 (treatment group)	<i>In response to this statement, the owner of a science and health Facebook fan page</i> said that there are fake eggs from China sold illegally in the market. It has to be stated that the composition of fake eggs does not provide any benefits for health, and will be harmful from their chemicals. The inspection of fake eggs is being processed by the network of local public administration, including local and imported eggs. After random inspection in the market, no fake eggs have been found.

Table 5.6: The set of questions of trust after reading one of the debunking messages of dread rumour

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
After reading this, I trust the information that Thai Alternative Medicine provided.					
After reading this information, I would like to share it on social media.					
After reading this information, I think it is convincing.					
After reading this information, I think it is logical.					
After reading this information, I think its message supports what I have believed.					
I think the science social influencers/the government have a good understanding of the cancer treatment.					
I think the science social influencers/the government usually speak honestly to the public.					
I think I share similar values to the science social influencers/the government about the cancer treatment.					

5.3.3 Sample Population Recruitment

A pilot test was conducted prior to actual data collection with ten participants all of whom are Thai online social media users. I amended some questions in order to have correct understanding for each one. This survey aimed to have 200 valid responses due to the time allowance of the data collection period. The targeted participant was Thai people who had a Facebook account, and who used it to read news and information. I decided to use convenience sampling to reach this target. A public invitation to join the survey was created on my personal Facebook account, tagging 100 of my Thai Facebook friends and asking them to forward this to friends of friends. Links to the survey were also included with the invitations. I obtained about 365 responses from this; however, only 269 turned out to be valid, but this was enough to do the analysis.

Figure 5.3

Punjapha Ja Pitigraisorn is with On Passon and 72 others. 16 November 2018 · 🌐

ทุกคน จะรบกวนขอให้เพื่อนๆ พี่ๆ น้องๆ ญาติๆ ทำแบบสอบถามอันนี้ให้หน่อยนะคะ มันสำคัญมากมันสำคัญมากมันสำคัญมาก มันสำคัญมาก มันสำคัญมากมันสำคัญมากมันสำคัญมาก สำหรับการเรียน เพราะต้องเอาข้อมูลไปคุยกับอาจารย์ต้นเดือนหน้าแล้ว มันจึงสำคัญมากสำคัญมากค่าาา กราบขอ

เป็นแบบสอบถามเกี่ยวกับ "ประสบการณ์ใการรับข้อมูลข่าวสารเรื่องอาหาร สุขภาพ วิทยาศาสตร์ผ่านโซเชียลมีเดีย (Facebook)"

*** ใครที่เล่นเฟซบุ๊กทำได้หมดค่า ***

แบบสอบถามเป็นภาษาไทยนะคะ แบบเดียวเสร็จค่าา ไม่เกิน 10 นาที

ใครสะดวกรบกวนแชร์ให้หน่อยนะคะ ได้จำนวนที่ต้องการเมื่อไหร่จะหยุดร่าร่องทันที หนูสัญญา ขอโทษเพื่อนๆ ที่ต้องแท็กด้วยนะคะ ดีขึ้นแท้กทุกคนบนโลกจริงๆ

*** ใครทำเสร็จแล้ว remove tag ได้เลยนะคะ ***

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The Post Inviting People to Participate in the Survey

The invitation explained that I wanted to ask them to complete the survey, and that it was important for my study. It was about experiences of receiving information about food, health and science on Facebook, and it would take no longer than ten minutes. All were welcome to forward the survey to their friends and friends of friends, and they were able to remove their Facebook tags once they completed it. Note that the invitation did not state that it was about 'food rumours' because I did not want the participants to be aware of knowing or not knowing about the food rumours. Whether the participants already knew about it or not was important for the analysis.

5.4 The Results

The survey collected 265 valid responses. Table 5.8 shows the socio-economic conditions of the people in the sample.

Table 5.7: Socio-economic conditions of the respondents of the food rumour experimental survey

Socioeconomic Variables			N = 265	%
Gender \ Age	Male	Female		
21-30 years	18 (32.7%)	37 (67.3%)	55	100
31-40 years	52 (30.6%)	118 (69.4%)	170	100
41 years and above	8 (20 %)	32 (80 %)	40	100
Total	78 (29.4%)	187 (70.6%)	265	100
Educational Level				
High School			11	4.2
Bachelor Degree			111	41.9
Master Degree			129	48.7
Doctoral Degree			14	5.3
Time spent on Facebook per day				
Below 1 hour			27	10.2
Between 1-3 hours			123	46.4
Between 4-6 hours			85	32.1
Between 7-9 hours			15	5.7
Between 10-12 hours			11	4.2
More than 12 hours			4	1.5
The frequency of information of food and science seen on Facebook				
Never			5	1.9
Seldom			36	13.6
Sometimes			97	36.6
Often			112	42.3
Always			15	5.7

This section begins by discovering the number of people who knew about the rumours and what their prior perceptions were, before their trust in the rumours can be tested after they read the rumour messages. The results show that 67% of people did not know about soursop cancer treatment, while 18% partially knew about it and 14% did know about it. Since they did not know about it, 87% of the people in the sample were unsure if soursop could help with cancer treatment. Only 3% agreed that it can cure cancer, while 8% did not agree.

Testing prior perceptions about rumours was carried out by a one-way ANOVA comparing people among three groups, those who knew about the rumour before, those who did not and those who knew partially.

Hypothesis 1: People who do not know about the rumour of soursop cancer treatment will trust in it more than the other two groups.

Hypothesis 2: People who do not know about the story of fake eggs will be likely to trust in the rumour more than the other two groups.

Table 5.8: The summary trust score of people who do not know about the story of wish rumour and dread rumour.

Rumours	Yes	No	Partially Yes	Average Mean
Wish Rumour (N = 265) <i>Know about soursop cancer treatment</i>	39	178	48	(N = 265)
<i>Mean score of trust (Max score = 25)</i>	12.44	14.48	15.46	14.36
Dread Rumours (N = 265) <i>Know about fake eggs</i>	179	32	54	(N = 265)
<i>Mean score of trust (Max score = 25)</i>	14.20	13.69	13.93	14.08

5.4.1 Hypothesis 1 Results

After people in the sample had read the rumour, they had to answer five questions of trust. All the questions asked the people in the sample to rate their agreement in a Likert scale. The scale ranged from 1 strongly disagree to 5 strongly agree. Having produced a clear result for each question, the trust scales were computed into single trust scores, ranked from 5 to a maximum of 25, and later tested using a one-way ANOVA with the mean scores plotted. These results show the mean of the trust scores representing the extent to which people who knew, did not know and partly knew, trusted the rumour.

The mean score of trust was calculated by the average scores of the five statements in questions 3.1 to 3.5 crossed with the three conditions of knowing about soursop and cancer treatment. The mean score of trust showed slight differences. The people in the sample who 'partially knew' seemed to trust in the rumour more than the other two groups.

The mean scores show that people who 'knew partly' about soursop cancer treatment were likely to trust that soursop can kill cancer cells, at 15.46 out of the maximum score of trust of 25. They showed the difference in trust scores from 1 (disagree strongly) to 5 (agree strongly). Thus, there was a significant effect on the level of trust in all of the five issues at the $p < .05$ level among the three groups: $[F(2,262) = 5.983, p = .003]$. However, the number of people in these three groups were not equally distributed; in other words, they were not statistically different.

The results show that people who knew about soursop as a treatment for cancer were least likely to trust the rumour, compared with people who didn't know about it or partially knew. It is interesting that people who partially knew about the rumour trusted in the message and the source, more than people who did not know about it before. It is assumed that the people who partially knew did not have all of the information about it. They were then likely to be influenced by the message and the source. They were more vulnerable to being persuaded than the other two groups. The group of people who did not know about it were expected to be those that ranked highest in trust, but they had a lower score than the people who partially knew. It is not surprising that people who knew about it had the least trust. The results reject the hypothesis that people who do not know about the rumour will trust in it the most.

A similar hypothesis was tested about people's prior thoughts about whether 'soursop can cure cancer' to find out the level of trust in the rumour, also by a one-way ANOVA.

5.4.2 Hypothesis 2 Results

The mean scores show that people who 'knew' the story of fake eggs were likely to trust that the rumour was true more than the other two groups, at 14.20 out of the maximum score of trust of 25. However, there was no significant effect on the level of trust in any of the five issues at the $p < .05$ level among the three groups: $[F(2,262) = .220, p = .802]$.

There was not much difference in the mean scores among the three groups. This means that people were likely to be neutral and agree with this rumour; in other words, there was no difference in trust whether people knew, did not know or partially knew about the existence of fake eggs before. None of the trust measurements had any significant effects if the story was known, unknown or partly known about. Even if people in the sample knew about the story of fake eggs before, they still believed that the existence of fake eggs was true. The people in the sample who did not know about fake eggs scored the lowest trust scores compared with that of the other two groups. Overall, this rejects the hypothesis that people who do not know about the rumour will have the highest trust. However, since the proportion of people in the sample in those three groups were not equally distributed, the mean scores of trust had no statistical difference.

Hypothesis 3: People who think that soursop is able to cure cancer will be likely to trust in the rumour more than the other two groups.

Hypothesis 4: People who think the fake eggs story is true will trust in it more than the other two groups.

Table 5.9: The summary of the people who agree with the rumour

Rumours	Yes	No	Partially Yes	Average Mean
Wish Rumour (N = 265) <i>Agree that soursop can kill cancer</i>	10	23	232	(N = 265)
<i>Mean Score of trust (Max score = 25)</i>	18.40	9.96	14.62	14.36
Dread Rumours (N = 265) <i>Agree that fake eggs exist</i>	146	46	73	(N = 265)
<i>Mean Score of trust (Max Score = 25)</i>	15.5	9.93	13.86	14.08

5.4.3 Hypothesis 3 Results

The results show that people who agreed that soursop can kill cancer were likely to trust the story of soursop as cancer treatment. Because the total number of people who 'knew' about soursop as a cancer treatment was relatively low, the number of people who were 'unsure' about the effectiveness of soursop to kill cancer was high, at 232 out of 265. Even though they were unsure about it, the trust scores were high, at 14.62. They showed the difference in trust scores from 1 (disagree strongly) to 5 (agree strongly). Thus, there was a significant effect on the level of trust in all of the five issues at the $p < .05$ level among the three groups: $[F(2,262) = 20.126, p = .000]$. However, since the proportion of people in the sample in those three groups were not equally distributed, the mean score of trust had no statistical difference.

The results agree with the hypothesis that people who think that soursop can kill cancer are likely to agree with the story more than the other two groups. Overall, the prior thoughts of people in the sample were likely to be 'neutral' and to 'trust' in the rumour, especially in the categories of 'partially know about the rumour' and 'not sure about its ability to kill cancer'. The message did influence people who knew about the rumour to

be more trusting than the people who did not know about it before as they may have been more vulnerable to the information.

5.4.4 Hypothesis 4 Results

The results show that from the obvious different scores of trust, the majority of people in the sample agreed that fake eggs exist. This was in parallel to those who disagreed and did not believe in fake eggs. The people in the sample who were unsure about the issue still had high trust in the content of the rumour. There was a significant effect on the level of trust in all of the five issues at the $p < .05$ level among the three groups: $[F(2,262) = 34.155, p = .000]$.

The people in the sample who thought the fake eggs rumour was true had the highest trust in the news from Nation TV, similar to those who were unsure, who had a higher score of trust than the people who thought the story was false. Thus, there was a significant effect on the level of trust in all of the issues at the $p < .05$ level among the three groups. The null hypothesis is accepted here and the alternative hypothesis is not.

Hypothesis 5: People are likely to trust the message from social influencers more than the government (wish rumour)

Hypothesis 6: People are likely to trust the message from social influencers more than the government (dread rumour)

These hypotheses form the starting point of experimental manipulation, measuring trust by asking people to read one of the four responsive messages put to them. Testing trust between social influencers and the government was divided into two terms: source and message. The source, or speaker/communicator, was the social influencer and the government who sent a message, while the message was the way these communicated in

different ways. The governments spoke formally, whereas the social influencer did so informally.

Authentic messages and sources from the government and the social influencer were defined as control groups. The treatment groups formed the experiment where the message and the source were interchanged. These four conditions were equally randomised for people in the sample. The table 5.10 shows that groups 1 and 2 were the control groups, while groups 3 and 4 were the treatment groups.

Table 5.10: The summary of the experimental group in the survey

Message Style		Message Source	
		Social influencer	Government
Social influencer		Group 1: People who read the unofficial message from social influencers.	Group 3: People who read the unofficial message, which was sourced by the government.
Government		Group 4: People who read the official message, which was sourced by social influencers.	Group 2: People who read the official message from the government.

H0: The level of trust in the message from both social influencers and the government is equal.

H1: The level of trust in the message from both social influencers and the government is not equal.

The hypothesis tested whether the *official* or *unofficial* messages were accounted for in trust by grouping them into similar messages. Thus, groups 1 and 3 were combined into group A, and groups 2 and 4 were combined into group B.

Group A – People who read the unofficial message (social influencer).

Group B – People who read the official message (the government).

This hypothesis also found out the *impact* of the message. The testing was processed through the independent sample t-test. The dependent variables were eight statements from messages 1–4 (wish rumour) and 5–8 (dread rumour), where people in the sample rated the scores of trust, from strongly disagree (1) to strongly agree (5). With four conditions and eight sub-questions each, there would be total scores of 8 to a maximum of 40.

Wish rumour

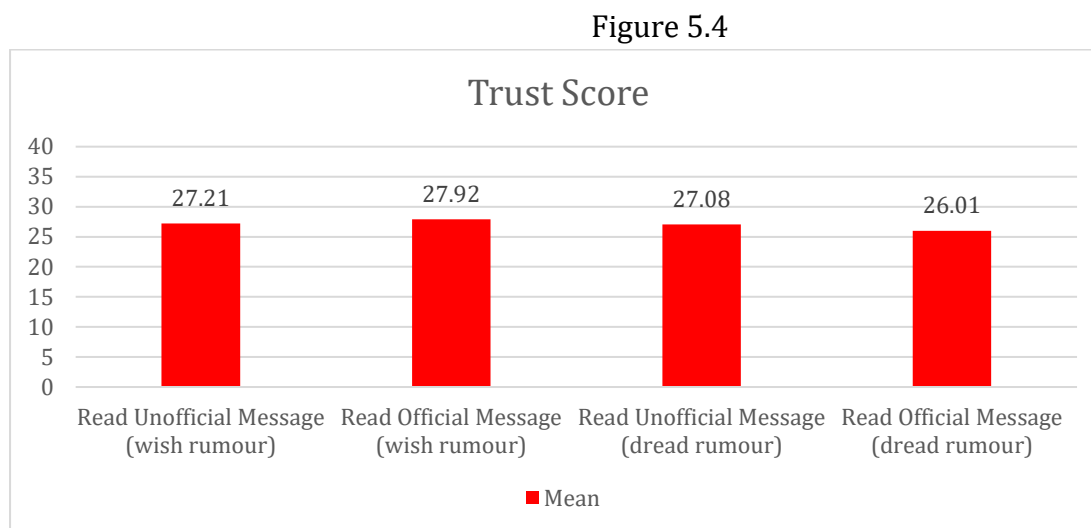
1. After reading this information, I think it supports what I have believed.
2. After reading this information, I think it is convincing.
3. After reading this information, I think it is logical.
4. After reading this, I trust the information that Thai Alternative Medicine (the source) provided.
5. After reading this information, I would like to share it on social media.
6. I think the source has a good understanding of the cancer treatment.
7. I think the source usually speaks honestly to the public.
8. I think I share similar values to the source about the cancer treatment.

Dread rumour

1. After reading this information, I think it supports what I have believed.
2. After reading this information, I think it is convincing.
3. After reading this information, I think it is logical.
4. After reading this, I trust the information that Thai Alternative Medicine (the source) provided.
5. After reading this information, I would like to share it on social media.
6. I think the source has a good understanding of the issues of fake food.
7. I think the source usually speaks honestly to the public.
8. I think I share similar values to the source about the issues of fake food.

5.4.5 Hypothesis 5 Results

The Figure 5.4 shows the results of hypothesis 5 and 6.



The Summary of Trust Score of the Message by Social Influencers and
the Government in Wish and Dread Rumour

To test the hypotheses about the messages being associated with statistically significantly different levels of trust, an independent sample t-test was performed. The assumption of homogeneity of variances was tested and satisfied via Levene's F test: $F(263) = 2.566, p = .110$. The independent sample t-test was *not* associated with a statistically significant effect: $t(263) = -1.059, p = .291$. There were no differences in variances between the two groups. This means that the level of trust between people reading the messages from the social influencer and the government were similar, represented by the mean scores of 27.21 and 27.92.

Although the overall scores of trust did not show huge differences between the two actors, there was one statement that people in the sample responded to where there was a significant difference, and that was whether the arguments from social influencers and the government about soursop were logical. People who read the message from the social

influencer came out as ($M = 3.53$, $SD = .810$), and those who read the message from the government ($M = 3.72$, $SD = .689$) – conditions $t(263) = -2.061$, $p = .042$. This shows that people agreed that the statement from the government was more logical than that of the social influencer.

In conclusion, this rejects the H1 alternative hypothesis and accepts the H0 null hypothesis. There was no difference in trust of the messages between social the influencer and the government.

5.4.6 Hypothesis 6 Results

An independent sample t-test compared people who read the informal style message and the formal message. Overall, there were no differences in variances between the two groups. The assumption of homogeneity of variances was tested and satisfied via Levene's F test: $F(263) = 1.164$, $p = .282$. The independent sample t-test was *not* associated with a statistically significant effect: $t(263) = 1.436$, $p = .152$. The mean scores of trust did not show much difference – between 26.01 and 27.08. In conclusion, this rejects H1 and accepts H0. There was no difference in trust of the messages between the two groups.

Hypothesis 7: People are likely to trust in the social influencer as a communicator more than the government (wish rumour).

Hypothesis 8: People are likely to trust in the social influencer as a communicator more than the government (dread rumour).

These hypotheses grouped people according to source. Thus, groups 1 and 4 were combined into group C, and groups 2 and 3 into group D.

Group C – People who read any messages sourced by the social influencer.

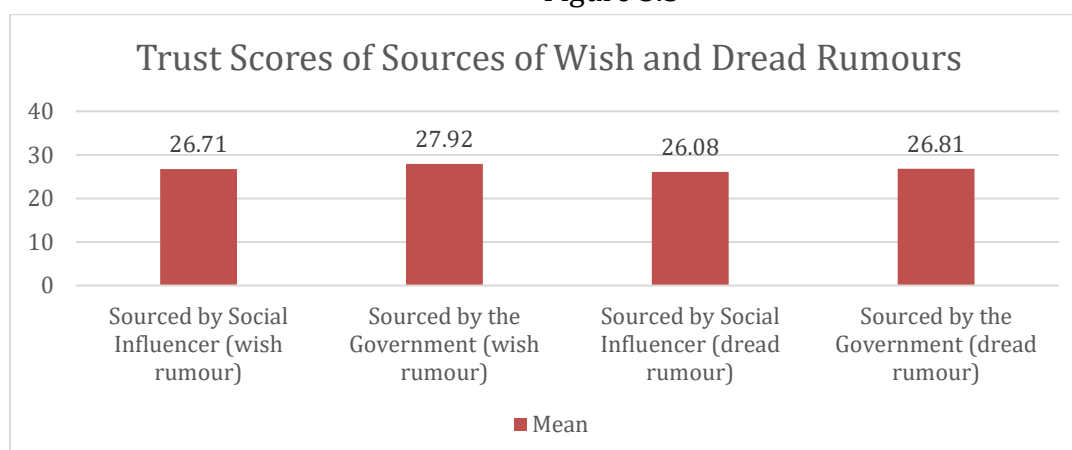
Group D – People who read any messages sourced by the government.

H0: The level of trust in the speakers from both the social influencer and the government is equal.

H1: The level of trust in the speakers from both the social influencer and the government is not equal.

This hypothesis tested the impact of the source, since people might have wanted to ‘trust who spoke’ more than the messages themselves. Testing was processed through the independent sample t-test. The dependent variables were the eight questions above, where people in the sample rated the scores of trust from strongly disagree (1) to strongly agree (5). With four conditions and eight sub-questions each, there would be total scores of 8 to a maximum of 40.

Figure 5.5



The Summary of Trust Score of the Sources Compared between Social Influencers and the Government in Wish and Dread Rumour

5.4.7 Hypothesis 7 Results

To test the hypotheses about the messages being associated with statistically significances different in levels of trust, an independent sample t-test was performed. The assumption of homogeneity of variances was tested and satisfied via Levene's F test: $F(263) = .662, p = .417$, showing that the value of significance was greater than .05. The

trust scores from both the social influencer and the government did not vary hugely, the mean scores being between 26.71 and 27.92. However, the Sig (two-tailed) value was .014 (less than .05). This shows that there was a statistically significant difference between the trust scores of the social influencer and the government in terms of being sources of the messages. In other words, both messages sourced by the government had higher trust than those sourced by the social influencer.

However, one of the issues that showed significant difference between the two groups was whether they trusted in the information the social influencer or government speakers provided. People who read any messages sourced by the social influencer came out as ($M = 3.46, SD = .789$), and those who read any messages sourced by the government ($M = 3.78, SD, .698$) – conditions $t(263) = -3.450, p = .001$. This statement confirms that people in the sample trusted more of what the government said than the social influencer. In conclusion, this rejects H_0 and accepts H_1 . There was a difference in trust between the social influencer and the government as sources.

5.4.8 Hypothesis 8 Results

An independent sample t-test compared the influence of the social influencer and the government in terms of being sources of trust. The assumption of homogeneity of variances was tested and satisfied via Levene' F test: $F(263) = .516, p = .473$. The independent sample t-test was *not* associated with a statistically significant effect: $t(263) = -.983, p = .327$. There were no differences in variances between the two groups. This means that the social influencer and the government were similar when compared as two sources, from the mean scores of 26.08 and 26.81. In conclusion, this accepts H_0 and rejects H_1 . There was no difference in trust in the speakers between the two groups.

Hypothesis 9: All groups of people are likely to trust in the communicator (social influencer) more than the government (wish rumour)

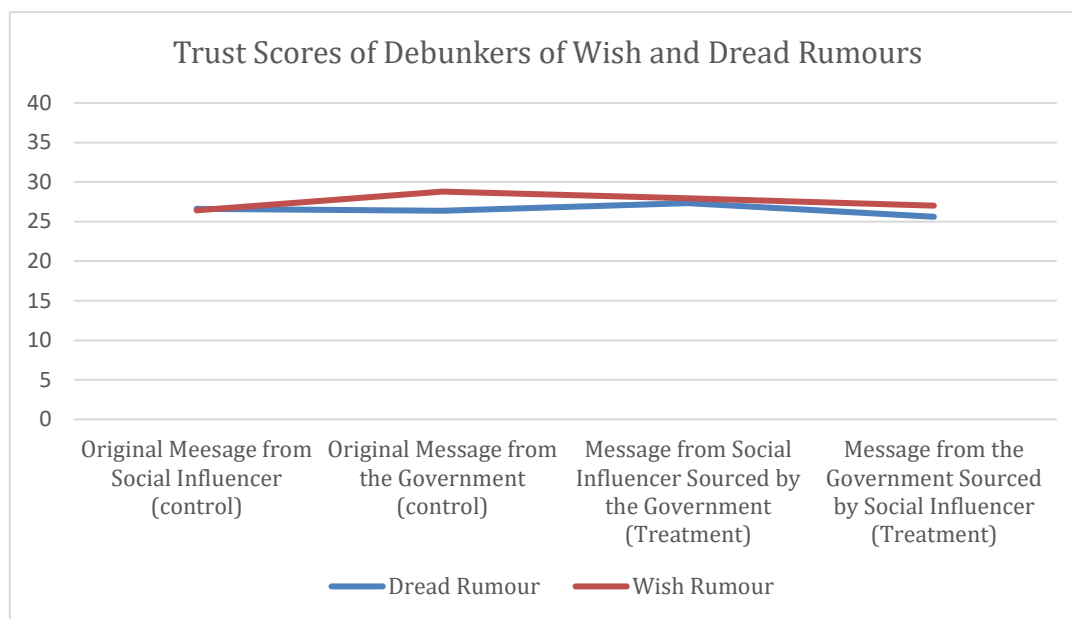
Hypothesis 10: All groups of people are likely to trust in the communicator (social influencer) more than the government (dread rumour)

These hypotheses manipulated all four groups of people in the sample, including the control groups and the treatment groups, as to whether they trusted in the social influencer more than they did the government. Since there were more than three groups of the independent variable, the testing of this hypothesis was carried out by a one-way ANOVA. The dependent variables on the scale of trust ranked from strongly disagree (1) to strongly agree (5). Having produced clear results, the Likert scales were computed into single trust scores, ranked from 8 to a maximum of 40 through five questions, and later tested using a one-way ANOVA.

5.4.9 Hypothesis 9 Results

Overall, there was no significant effect between the four groups of people [$F(3,261) = 2.433, p = .065$]. People who read messages from the government had a slightly higher trust level. This shows that the government does have more influence in communication than social influencers. The communication from the government gave more a sense of confirmation about consuming soursop, and they concluded that 'It is not appropriate to consume this herb for killing cancer'. Even though they were the speakers of the social influencer's message, the score of trust level was slightly higher than when the social influencer gave the information himself.

Figure 5.6



The Line Graph Comparing Trust Scores of Four Conditions of People in the Sample

5.4.10 Hypothesis 10 Results

To test this hypothesis, a one-way ANOVA was carried out. The dependent variables on the scale of trust ranked from strongly disagree (1) to strongly agree (5). Having produced clear results, the trust scales were computed into single trust scores, ranging from a minimum of 8 to a maximum of 40 through five questions, and later tested using a one-way ANOVA. It is clear that overall, there was no significant effect among the four groups of people [$F(3,261) = 1.031, p = .379$]. The plots show that the third point (3) has a slightly higher trust score than the other groups. For this group, the government gave the message of the social influencer. The message from the social influencer gives an absolute answer that the fake eggs story is false and explains that this has been going on for a long time. It is interesting that the mean scores of trusts between the first point and the third point, where the social influencer was the source of this message, were lower than when the government gave the same message. This implies that the government still appear as a slightly more credible source than social influencers.

Likewise, there is not much difference between these two speakers. Social influencers still maintain a high amount of trust when they speak.

Hypothesis 11: Is the message from the government effect trust differently?

This hypothesis attempted to produce more obvious details about the influence of the message and trust by carrying out linear regression. The questions from the questionnaire asked respondents to rate in the scale of trust from 1 (strongly disagree) to 5 (strongly agree). This scale was then turned into scores in one single variable. Thus, the scores would rank from 1 to 5. As the total number of questions was eight, the total score for each person would rank from 8 to 40.

Table 5.11: Linear Regression Analysis of Predictors of Trust in Wish Rumours

Predictor Variables	Regression	Std. Error
<i>Gender</i>	<i>.124</i>	<i>.740</i>
<i>Age</i>	<i>-.149*</i>	<i>.048</i>
<i>Educational level</i>	<i>-.967</i>	<i>1.672</i>
<i>Time spent on Facebook</i>	<i>.120</i>	<i>.332</i>
<i>Knew about rumour before</i>	<i>-1.002</i>	<i>.718</i>
<i>1 Yes</i>		
<i>0 No</i>		
<i>Message Styles</i>		
<i>1 Formal message (the government)</i>	<i>.714</i>	<i>.663</i>
<i>0 Informal message (social influencer)</i>		
<i>Source</i>	<i>1.716*</i>	<i>.661</i>
<i>1 The government</i>		
<i>0 Social influencer</i>		
<i>R</i>		
<i>R² Change</i>		
<i>N = 265</i>		

* $p < .10$ ** $p < .05$ *** $p < .01$

5.4.11 Hypothesis 11 Results

Table 5.11 shows the age variable spoken about by the government was statistically significant, but gender, educational level and time spent on Facebook were not, and did not affect trust. Any message with the government as the source (as the speaker) showed an increase in trust to 1.716, and given that the average was 27, this had a marginal effect. When the government spoke very little, age decreased in significance for trust. For every point of increase in age, trust reduced by .0124.

On the other hand, the variables spoken by the social influencer were significant and decreased trust, at 1.716. The message variables were not significant in terms of trust. This means that the coefficient was not significantly different from 0.

This confirms that the message itself does not have any effect on trust; however, once the government speaks, this does have an effect, even if they only do so in a small amount. It is assumed therefore that the government can empower messages. Likewise, information related to food and health still receives high trust from the public. People would rather listen to the government to confirm or reject situations about risks in food and health.

Since there was more effect by the government, the interaction variable between *message* and *source* by the government was added in order to see whether this would have a greater effect on the level of trust. Table 5.13 reveals that there was no significant effect by the interaction variable.

Table 5.12: Linear Regression Analysis of Predictors of Trust in Wish Rumours

Predictor Variables	Regression	Std. Error
<i>Gender</i>	.127	.743
<i>Age</i>	-.148*	.048
<i>Educational level</i>	-.974	1.675
<i>Time spent on Facebook</i>	.116	.336
<i>Knew about rumour before</i>	-1.007	.721
1 Yes		
0 No		
<i>Message Styles</i>		
1 Formal message (the government)	.652	.951
0 Informal message (social influencer)		
<i>Source</i>	1.658*	.918
1 The government	.122	1.339
0 Social influencer		
<i>Interaction (message by gov * source by gov)</i>		
<i>R = .259</i>		
<i>R2 Change = .067</i>		
<i>N = 265</i>		

* p < .10

** p < .05

*** p < .01

Hypothesis 12: Do the message styles effect trust differently depending on whether they come from the government or the social influencer?

5.4.12 Hypothesis 12 Results

This hypothesis was like the three hypotheses above. However, it attempted to bring out obvious and detailed results about the influence of the message and trust. A model of regression was carried out. The questions from the questionnaire asked respondents to rate in the scale of trust from 1 (strongly disagree) to 5 (strongly agree), This scale was then turned into scores in one single variable. Thus, the scores would rank

from 1 to 5. As the total number of questions was eight, the total score of each person would rank from 8 to 40

Table 5.13: Linear Regression Analysis of Predictors of Trust in Dread Rumours

Predictor Variables	Regression	Std. Error
Gender	<i>1.376</i>	.815
Age	<i>-.117**</i>	.053
Educational level	<i>-2.023</i>	1.848
Time spent on Facebook	<i>.437</i>	.368
Knew about rumour before	<i>-1.801</i>	1.129
<i>1 Yes</i>		
<i>0 No</i>		
Message Styles	<i>-1.206</i>	.738
<i>1 Formal message (the government)</i>		
<i>0 Informal message (social influencer)</i>	<i>.979</i>	.738
Source		
<i>1 The government</i>		
<i>0 Social Influencer</i>		
R = .238		
R ² Change = .057		
N = 265		

* p < .10

** p < .05

*** p < .01

Table 5.13 shows the age variable was significant here, meaning that it had a significant effect on trust. Trust decreased with age. For every point of increase in age, trust reduced by .117. Note that the average trust score was 26.48, so a marginal effect of .117 was relatively small.

On the other hand, the variable of knowing about the rumour beforehand also decreased trust, but it did not have significant effects. Overall, the variable of different messages from social influencers and the government does not have any effect on trust.

Two responsive messages from the social influencer and the government were different. The social influencer, an expert in health support, said that the story of fake eggs in the news showed that they did not differ from normal eggs, but were, in fact, better. He insisted that making fake eggs would cost more than real ones. The social influencer's message shows that this rumour has been around for a long time, and he does not show any fear in this story. However, the government seemed to accept that fake eggs may truly exist on the market, and they took action to tackle the problem by having random inspections, later confirming that they had not been found. These two messages give different senses of science communication. The social influencer mentioned the 'anatomy' of fake eggs, attempting to explain that they are 'normal' and not something to be frightened of. Also, he tried to encourage people to think that making fake ones would cost more. The government, though, decided to communicate by taking action and proving to the public that fake eggs do not exist. The actions of the government helped to decrease fear among the public.

Table 5.14: Linear Regression Analysis of Predictors of Trust in Dread Rumours

Predictor Variables	Regression	Std. Error
Gender	1.388	.817
Age	-.120*	.053
Educational level	-2.104*	1.863
Time spent on Facebook	.438	.369
Knew about rumour before	-1.811	1.132
1 Yes		
0 No		
Message styles	-1.534	1.109
1 Formal Message (the government)		
0 Informal Message (social influencer)	.651	1.110
Source by		
1 The government	.597	1.503
0 Social Influencer		
Interaction (message by the government * source by the government)		
R = .239		
R ² Change = .057		
N = 265		

* p < .10

** p < .05

*** p < .01

Table 5.14 shows the regression model added the interaction variable, multiplying messages and sources from the government. Overall, there were slightly different results, but there was still no significant effect in the interaction variable. For every point of increase in age, trust was reduced by .0120, which was similar to educational level, where trust decreases by 2.104.

5.5 Discussion

This experimental research had 265 people in the sample, which is considered as small-scale and not leading to equal distribution or being statistically significant. Moreover, in the sample there are more females than males, with most people falling in the 31-40 years age bracket. This would be because my social media connections have more females. Thus, the results have rather been based on the female's trust. However, it could still represent the way in which people perceive and trust rumours and those who debunk them. Out of the maximum trust scores of 25, the average trust rating of the wish rumour was 14.36 and 14.08 for the dread rumour. This shows that, overall, people in the sample were unsure about both issues, even though they were in the form of journal reports and news. This assumes that they were able to identify the possibilities of the accuracy of both stories.

Most people in the sample, 179 out of 265, knew the story about fake eggs beforehand, while only 39 out of the 265 people knew about soursop cancer treatment. This was despite soursop being discussed over the past few years, which one would assume would mean that it would have been well-known in some targeted populations. This means that accurate information is not always delivered to as many people as it should be.

The reason for this difference is the issue of fake eggs has been more widely reported on in the media than issues of soursop. Fake eggs have been claimed to have been found a few times in rural areas, but this is awaiting further investigation, while the issues of soursop have been more targeted on cancer patients. Since they do not know about it, they are unsure if soursop can kill cancer. The story of fake eggs has also been more common as eggs are basic ingredients in the household.

If considering the messages from the social influencer and the government, both attempt to say that the accuracy of soursop being a cure for cancer is not confirmed. However, they have different styles of communication. The social influencer originally explained that extracts from soursop are harmful to nerves and kidneys, while the government said clearly that this was not true but insisted that it is not 100% safe. These early standpoints showed that the government were more decisive than the social influencer, and the use of words was slightly easier to understand. The social influencer later explained that soursop can be developed with chemotherapy, mentioning about poisonous annonacin. The government did mention that soursop contains antioxidants to kill cancer while also being toxic to nerves. The words used by the government seemed to be more basic than the social influencers. The conclusion of this chapter shows that the social influencer is still open to further investigation under the controls of toxicology and safety. The government has repeated again that soursop is not appropriate to consume. People will have to wait for confirmation that it has no side effects. The difference can be seen that the government has made a decision promptly for the public that soursop cannot be used at the moment, but the social influencer, while he speaks in a similar way, says that further studies are required. Overall, the social influencer uses more technical words than the government. The message from the government makes points that are easier to understand with clearer answers.

The messages about the issue of fake eggs from the social influencer and the government were different. The social influencer said clearly that these are 'not fake eggs'. The description about fake eggs in the news is the normal anatomy of them. He insisted that the fake eggs story has been 'a rumour for a long time' and a high level of technology would be required to make them. The government, however, admitted that fake eggs exist

in the market. They also investigated samples of fake eggs from the market and did not find fake ones.

The two debunked messages were obviously different in style. The social influencer was more decisive by giving a final answer that the story was not true. He also said that 'it has been a rumour for a long time'. This sentence would have brought up slightly negative feelings for some people if they did not really know about it. However, the readers would have realised that they should have left this as an unimportant issue since it would always be false. The social influencer did not explain further, why it would be difficult to make a profit from making and selling fake eggs. The government firstly admitted that there were fake eggs on the market, even though they did not have proof. Since the eggs have been claimed to be found on the market and the majority of people in the sample in the survey also agreed with this, this would have made them think that the government supported their thoughts. Later, the government gave proof that fake eggs had not been found from their investigation. This message is still communicated by the head of the department. This assumes that some food issues are seen as important cases. The message from the government looks clearer and pays more attention to the public compared with the social influencer.

For the component of trust discussed earlier, it is clear that both the social influencer and the government have their own knowledge and expertise. They have both used scientific terms in their content, e.g. chemical vocabulary. Even though their messages are different, they are both likely to receive the same level of trust, if considered via the mean scores. However, the government obtained higher trust scores in some measurements. The people in the sample saw that the message from the government was more logical than the social influencer's, but only by a tiny amount. Once tested by grouping the sources of

the government and the social influencer, both received a similar amount of trust. This shows that the social influencer became as reliable a source as the government. Both the government and the social influencer showed their openness and honesty. The source from the government was known as a verified health institution, the head of a department of the Ministry of Public Health. The social influencer showed openness and honesty by using a public social media channel, displaying their full name when posting their content. Their concern and care can also be seen by the repetition of their post. Since soursop cancer treatment had been an issue for over a year, he repeated his post every time it was brought back, in 2014 and 2015.

The results found that the majority of people in the sample 'did not know' about soursop and they also 'inaccurately perceived' fake eggs, even though these two issues seemed to have been repeatedly discussed. After they read the debunked messages, they were still in between being unsure and slightly tending to trust both the social influencer and the government. This also confirms that insufficient knowledge to assess risk level leads to the need for social trust (Earle and Cvetkovich, 1995; Luhmann, 1989) However, the average scores of trust from people in the sample was still in between agreeing and disagreeing. This represented that the people in the sample were not going to put their full trust in the hands of any of the experts. It also implies that they are still unable to make the decision, even after having received more information.

This experiment leads to the term of *interpersonal trust* – trust in information sources and targeted audiences, while social trust is the way individuals or organisations manage their responsibilities to support people to make a choice (Stefani, et al., 2008). The relationship between trust in information and risk attitude has not yet had clear empirical research (ibid, 2008). This experimental survey could show that it is hard to

specify the target audience in social media since the information can be delivered randomly, but not fully to everyone. The statement that people's scientific knowledge is insufficient may not be applied in the current situation. This is because food rumour requires the understanding of common scientific knowledge, and being able to reach this through available sources such as books, journals or websites. People learn basic science knowledge through education, but some specific topics are obtained via the mass media (Brossard and Shanahan, 2003). While social media is a platform that encourages the spreading of rumours, it can also provide an accurate source of science knowledge. The level of trust in the information also depends on previous knowledge and people's perception of it. This will lead to varying levels of trust. The first experiment assumed that the people in the sample who 'did not know' about the rumour would score the highest in trust after reading the story. However, the results showed that the people in the sample who 'knew partly' ranked the highest in trust. This assumes that the people in the sample who carried half of the information were reluctant to believe in it as it filled up their understanding. This is similar to people 'who were unsure' about the source being likely to trust in the information. Thus, interpersonal trust should have considered prior risk attitude in order to obtain a clearer image of the relationship of trust.

This experiment selected two cases of rumours, while there were many more happening in the Thai social media platform. There was an unbalanced number of responsive messages between the social influencer and the government. Thus, the cases that compared the communication to the public from these two communicators were low. However, both rumours were able to explain that the social influencer and the government nearly obtained the same amount of trust. Only tiny differences show that the government had slightly more trust than the social influencer, when the government became the source of the message. Age is another factor that explained the difference in

trust. Older people were likely to trust less in whatever both communicators said. The experiment confirmed that differences in trust in rumours are related to prior knowledge about them. Any communicators can communicate with the public; however, they are likely to receive the same amount of trust. Social influencers are new actors who can communicate science to the public even though they receive less trust compared with the government. Once the government becomes the source of the social influencer's message, it is likely they will gain more trust. This assumes that the government can adjust their communication to use less complicated terms, being more active inspectors in the food rumour cases. This helps them to have more success in communicating science to the public.

Even though most of the hypotheses were rejected, the social influencer did not receive much less trust than the government. It was firstly expected that the social influencer would receive more trust because he communicated closely with the public. However, the people in the sample trusted the government more on food and health issues.

5.6 Conclusion

This experimental survey provides two aspects of trust: trust in rumours and trust in debunking rumours. Since there is no approved verification of information on social media, there should be a battle of information among content builders, social media users or experts. Two types of rumour were selected, with one wish and one dread rumour, aiming to compare the different levels of trust. While the wish rumour gave a sense of hope to readers about recovering from the mysterious sickness of cancer, the dread rumour was about scaring readers, using the term of 'fake food'.

People in the sample read the original content of the two rumours. They then randomly read one response out of four messages. The four messages contained two original

debunked messages from the social influencer and the government, and the other two were treatment groups where the debunked message and source were interchanged. This helped to clearly compare the influences of the messages and sources towards trust.

Trust was measured by summarising the scores of the Likert scale. There were five questions after reading the original content of the rumours and eight questions to answer after reading the debunked messages. 67% of people in the sample did not know about soursop treatment for cancer and 87% were unsure about whether it truly works. Once this was cross-tabulated with the trust in the rumours, those people in the sample who were unsure about it had a trust score of 14.62 out of 25.

The results of the experimental stage of trust in the wish rumour show that there was no difference in trust between official and unofficial messages, with a tiny difference in score of 27.92 for the government and 27.21 for the social influencer out of 40. However, people in the sample rated the logic of statements from the government higher than the social influencer, with the scores of 3.72 and 3.53 respectively. Once the messages were grouped by same source, those having been sourced by the government received higher trust than the social influencer, with the scores of 27.92 and 26.71, respectively. The experiment continued by testing among four groups. Overall, the government received higher trust scores, even when they become the source of the social influencer's message. In other words, with the same message but a different source, the government scored higher in trust than the social influencer.

The regression model attempted to test the impact of each variable towards trust. The results found that age and source are significantly related to trust. Once people read the message sourced by the government, it increased in trust by 1.716, and trust was reduced by .0124 at every point of increase in age. Noting that the average of trust was 27, the

marginal effect was relatively small. The interaction between the message by the government and the source by the government variable added to the second regression model did not have any significant relation to trust.

The experiment continued with the dread rumour of fake eggs. The majority of people in the sample, 67.55%, knew the story of fake eggs, and 55.09% thought that they truly exist. After they read the content about fake eggs, the 67% of people in the sample who knew about them still trusted in the content. Those who thought that fake eggs exist relatively trusted in the content, at 55%. The results of testing different styles of message, formal and informal, in terms of influencing trust did not show any significant effect as being similar to different sources: the government and the social influencer. All four of the control and treatment groups were also tested on whether the social influencer or the government would receive more trust. There was no obvious difference in the level of trust between the social influencer and the government in this case. The group where the government became the source of the social influencer's content received the highest scores of trusts, but it did not have a significant effect.

The regression model showed that only the age variable had a significant effect on trust. For every point of increase in age, trust was reduced by .117. After adding the interaction variable between message and source by the government, the result slightly changed. Trust was reduced at .127 and 1.325 for every point of increase in age and education, respectively. It is noted that the average trust score, the dependent variable of the model, was 26.48. This had a relatively small amount of effect.

Overall, this survey experiment has its own weaknesses due to the size of the sample which should have more varied participants. Most people in the sample are aged between 31-40 years. Thus, the results have not shown the obvious differences in trust. However,

the results still present the aspects of trust in both experts, as the trust scores were very close. The results of the sample show that people prefer to have an unofficial style of communication, like social influencers but delivered by the government. This chapter has filled the part of people, as social media users, reflecting to the trust in rumour and the debunkers. The three empirical chapters have completed and have led to the conclusion in Chapter 6.

5.7 Limitations

The trust scale in this study does not have a scale validation but only applies the Likert scale. This is because the level of trust is subjective. Thus, having the Likert scale would be the most suitable option to see the different level of trust. However, the experiment should have applied the scale validation to have a valid measurement.

This experiment did not apply the Principal Component Analysis. Principal Component Analysis (PCA) is “....a dimensionality-reduction method often reducing the dimensionality of large data sets by transforming a large set of variables to a smaller but still having the most information in the large set...” (Jaadi, 2020).

The data set of food rumours, with 265 participants and 13 questions should not be considered as a large dataset. However, if more rumour cases had been added into the experiment questions e.g. the debunking from other communicators, this would help the results to have more aspects of levels of trust.

The PCA is composed of standard deviation, variance, covariance, covariance matrix, eigenvectors, and eigenvalues. These components help to organise the dataset into the new aspects, showing the relationship and reducing the complexity. According to the dataset in the study, it has been simply designed. The extract factors of trust have been

broken down into eight questions. About six of them extract the keywords of trust; convincing, logical, support what they have believed, show a good understanding, speaking honestly and sharing similar values. These extracts attempt to define trust in social terms while trust could relatively be considered in more physiological terms e.g. emotional process (Thagard, 2018), trust related behavioral measurement (Leichtenstern et al., 2015). Thus, the PCA could not be well applied to this experiment since the survey experiment does not have complex dimension but clearly focuses on two debunkers with two rumour cases. The results and the analysis have initially and clearly brought out the trust towards disinformation. However, the PCA would be beneficial to further study if there is the survey experiment which includes trust in other dimensions.

There were many rumours on the social media platform. However, to have a clear comparison of trust, the rumours selected in this experiment must have been debunked by both a social influencer and the government. This reflects the limitation that there should be more rumours that have also been debunked by both. Due to the time-frame allowance for the survey experiment, the rumours selected end up with these two rumours. The two rumour messages appear neutral and have reliable references and do not have any bias as to whether people would or would not believe in them. The wish rumour is about the issue of cancer treatment and food. The issue of cancer always has been in the spotlight because a healthy person is still at risk of having it. Thus, the content of cancer and food treatment would be worth having in the experiment. The dread rumour about fake eggs has been repeatedly shared on the Internet. The fake eggs in the experiment has been reported in the real news. A further experiment could have added more rumours, but they needed to be carefully selected.

According to trust as an information processing heuristic, in other words, how people are persuaded by the message regarding from the heuristic-systematic model of information processing (Chen, Duckworth and Chaiken 1999), the experiment does not have any part which can extract how the people were persuaded by the message. What we can derive from the result is that age has some small effect on trusting the rumours. One more thing to confirm is that their personal background could have led them to trust in the rumour message. For example, a sick person could trust in the alternative treatment method, if they are desperate about their symptoms. The experiment provides persuasive rumour debunking messages. But what makes people trust it, is not only the message, it is also the source. All the sources; social influencer and the government, are all reliable. They play a role in food and health issues in society. Both communicate to the public in different styles. This is a point that would be of interest; the style of communication that would attract more trust. The overall score of trust between these two communicators was not very different. Both messages do make people trust it. It could be assumed that food rumours that do not claim to cause serious health problems, would lead people to engage in discussion with social influencers because they are more accessible and likely to give an instant answer and reduce worries. Chapter 4 confirms that the social influencer has answered individual queries about the rumours. Meanwhile, the health and food rumours that do claim to cause serious health problems, even death, people need confirmation from official institutions. This can be seen from the experiment that the government has slightly more trust than social influencers.

Regarding bias in information, the Facebook platform partly supports the bias as it allows people to choose their own preferred source. Some follow social influencers, while some follow the government. Others would follow both or more. The bias, in this context, is not

negative. Facebook allows people to select the media in their own favour. We need to admit that there are alternative media choices, offering any kind of information. The information selection is then subjective. There could be any reason to select the sources. However, the false food rumours have been extensively debunked. It could be assumed that more people should be aware of false information about food and health issues.

Admittedly, we know that the academic and scientific content would receive less attention compared to entertainment. Food rumours are one of the issues that calls their attention because it affects their life. This is what the experiment attempts to find out; what are the characteristics of the message that would make people trust in it. The experiment still has the weaknesses that there were only two debunkers and two messages. It would be better if more options were included in a future study.

Chapter 6

Conclusion

6.1 Introduction

This thesis studied disinformation, science communication and trust in the case of false food rumours on Facebook from 2013 to 2016 in Thailand. The disinformation, in this context, food rumour, was a phenomenon in the Thai social media community causing misunderstanding and misbelief in health treatment and health protection. Since there are no verified tools or gatekeepers to deal with unverified information on social media, debunking rumours helps to steer the public away from misperceiving disinformation. Food rumour messages generally consist of the misuse of science knowledge and logic about food. Thus, debunking rumours is a part of science communication, providing the public with scientific knowledge at the same time. Although it is only the FDA and social influencers blatantly debunking rumours, other actors, e.g. the media, NGOs, academics, etc., still communicate issues about food, health and science. It has been beneficial to study science communication in Thailand since social media is an important tool to help experts and the public have close communication. In addition, as this study has focused on messages and the experts, it has been necessary to study social media users who regularly engage with information on Facebook and the way they trust in rumours and debunkers. The three focuses led to three empirical chapters using the mixed methods of content analysis, in-depth interviews, and an experimental survey respectively. This concluding chapter will summarise the study and consider what can be inferred from the study and what to expect in the future.

Three research questions were issued to focus on messages, science communicators and the ways people trust.

1. *What are the features of food rumour content on Facebook in Thailand?*
2. *In what ways do the food, health and other related sectors communicate on rumours and the communication of science?*
3. *In what ways do online users trust rumours and debunkers?*

6.2 Content Analysis: Food Rumour

The first empirical chapter was a content analysis on food rumours. 73 rumours were collected from social influencers' Facebook accounts. There were 49 dread rumours and 24 wish rumours. The reasons for creating this disinformation are unconfirmed. However, this could relate to business profits, where people produce clickbait articles to attract online users and later earn money via the amount of online traffic. Dread rumours refer to sickness and death, while wish rumours signify hope of health treatment. The coded rumour results show three main themes: caution, hope and the use of science statements, with an additional two themes: the making of reliability (statements that make rumours more reliable) and emotional play (creating a mood for the readers). Caution rumours were about hazards of food leading to sickness or death. Wish rumours are about consuming certain foods to treat illnesses as alternative medicines. This chapter attempts to code and categorise food rumours that happened in Thailand into themes. What we can learn from the final theme is that it relates to major health problems in Thailand while reflecting Thai culture, respecting people from both insiders and outsiders of the family. They use the same terms to refer to older outsiders, for example, brother or sister.

The amount of food rumours collected from 2013 to 2016 is only a part of the total amount. Rumours have emerged into more categories, for example health rumours or political rumours. During these four years, Thai social media users actively shared these

unverified rumours and some people were hospitalised because they placed their trust in the information. As the emergence of rumours frequently relates to business profits, it is likely that they will continue to be released online because they are customised to match with societal and cultural contexts, food and health effects whilst playing on people's fears.

While the content analysis in this chapter represents a reflection of the food rumours spread online, it is also hoped that it will form a primary guideline for detecting suspicious online information. People would still not know whether the content is an exaggerated claim using fake references, however, they could at least be aware of both too positively or too negatively exaggerated claims.

The content analysis has been manually coded into themes because the software is not compatible with Thai, the original language. The characteristics of rumour messages are variable and have been grouped word by word into themes. The rumour data collection from 2013-2016 was carried out at the peak time of the spread of food rumours in Thailand. There was a proliferation of food rumours, especially in 2014-2015 when more people started to join the social media platform. However, they were at the same time, gradually learning that information on the Internet is not always right. Some rumours appeared repeatedly. This could mean that people were concerned about an issue and online platforms provided a shortcut for people to develop their media literacy and scientific knowledge. This was because of the need to learn to estimate the accuracy of information and understand the scientific explanations about rumours that had been debunked.

The Facebook platform not only connects friends and family, it also contains a lot of data, delivers up-to-date information and instant communication from officials to the public. It

helps scientific communication and communication of risk to be more practical in application and not just communication among scientists. The practical communication means that messages about science and risk are accessible and understood by the public. Involvement in questioning food rumours could be one of the bridges to encourage and enable the public to develop scientific literacy in everyday life issues.

6.3 In-Depth Interviews: Science Communication

The second chapter was a study of the communication against food rumours from related stakeholders. Since there are no verification tools or gatekeepers to deal with the accuracy of information, a possible solution to prevent the public from misbelieving rumours is to debunk them. The debunking of rumours can be regarded as part of science communication because it aims to clarify what is false information through evidence and scientific explanation. There were 16 interviewees from the food, health, science, and media sectors. This included the government, social influencers, NGOs, the media, academics, and private sectors. There were three sectors that had directly debunked rumours: The Consumer Empowerment Division (the government), the Sure-Korn-Share (Sure before Share) TV programme, Dr Jessada Denduangboripant (another social influencer). These three sectors had debunked rumours using different styles of communication. The government has strongly attempted to communicate about rumours; however, their science communication came under a bureaucratic process and was able to resolve the issue only under the policy framework. The government prioritised accuracy in their communication.

Sure-Korn-Share debunks many types of rumours, e.g. food, health, technology, law, etc., and are currently working on over 800 issues regarding food and health. The concept of this TV programme urges people to make sure content is accurate before sharing any of

it online. However, issues that the TV programme will debunk have to be appropriate to process on air so as not to incur huge costs.

The social influencer, Dr Jessada Denduangboripant (a science lecturer) has debunked many rumours in relation to food and health. He uses Facebook as his main communication channel, and he has freedom to communicate on or debunk any rumours, even those small and not in the public's attention.

Although the rest of the interviewees had not debunked rumours specifically, they had still published scientific content. The Greenery Foundation has an activity called the green market, supporting urban people to eat well and live green, as well as releasing an article about food and health online every day. The Online News Provider Association has a search engine on their website to check rumours, and there are around 30 various debunked issues on there. The director of the news provider association believes that false content is created due to business profits. The most effective content should use infographics and be tailored to fit smartphone screens. The National Cancer Institute of Thailand has a smartphone application, providing all necessary cancer information, and they normally use infographics in their content. The Thai Health Promotion Foundation supports people in gaining media literacy. They are one of the most effective organisations working on health promotion, having regularly published content in this area.

The media agencies: Thairath and Manager online having different focuses of science communication. Thairath has a 24-hour social media monitoring team and focusses on speed of communication. Manager Online prefers to concentrate on developing content into new articles instead of existing issues. The media takes a similar view to the News

Provider Association that the communication content has to be well displayed on smartphone screens with digestible, short, and quick messages.

The Kidney Institute Hospital deals with kidney disease patients and has more passive communication from the patients than one-way communication with them. Voice TV, has a targeted audience; the young generation and they mainly communicate on online platforms. They tend to use English or technical words in their content because they believe that the public can understand them or will explore further. GNews application aims to be an all-in-one service for the public to receive any news from the government. In addition, the application has a section to check the accuracy of the news.

Following the interview results, it shows various types of debunking and examples of communicating science.

I have identified the state of science communication in Thailand. Previous studies and the historical background of Thai society show low engagement in science communication from the public. From the four types of science communication in the literature, the communication in Thailand could fit into the first three models. The deficit model is labelled as 'one-way communication', which I would argue is only half-true. First, the deficit model seems to be old-fashioned in that scientists provide one-way knowledge to the public. However, this type of communication is needed because it helps to quickly reveal many misunderstandings from rumours that seem to in the first instance to 'make sense', e.g. the combination of lime and soda killing cancer cells. Some people would imagine that the acidity from lime and soda would destroy the cells in the body. Second, previous discussions of the deficit model have happened when platforms were mostly offline, e.g. newspapers, television and even chain email, and we cannot assume that the public do not want to interact; however, they do not have a space to communicate. Third, there is a

progress report after each one-way communication attempt. The knowledge given to the public helps them to deal with food rumours in the future. The results gradually show that social influencers receive less amounts of queries about previous rumours. The ones who know the truth could spread the truth to others.

The use of social media supports interaction and makes two-way communication exist and literally apply in the dialogue model. In the case of investigating fake seaweed in 2013, the user sent an example of the seaweed to a scientist. This reflects the exchanging of information in the dialogue model. The online platform encourages accessible communication between experts and the public.

The lay expertise model applies to the Greenery Foundation because they carry out activities that empower communities to support them to eat well and live green. The Council of Science Dean of Thailand has arranged the training of science academics to become 'trained personal media', supporting them to be able to communicate science wisely and successfully to the public.

The question of whether the deficit model is implicit in Thailand depends on the way we use the term science knowledge. If science knowledge means purely academic science subjects, it is hardly possible to have successful communication that helps the public to increase its level of science knowledge. Since knowledge can be anything related to our lives, science knowledge can be made to be more simplistic. The deficit model will be implicit if the communication is about encouraging the public to learn about the issues connected to their lives – which people will learn the best. This in turn will help to increase people's science knowledge. The report of the National Academies of Science (2016) stated that the deficit model is wrong and is unable to identify what audiences need. They believe that audiences may already understand science but that they just

disagree. I would argue that the deficit model is not about identifying what audiences need. It would inevitably be a failing model because it claims to be one-way communication where barriers of communication exist, e.g. offline platforms. Scientists communicate on various aspects, and as a result, this is random and regarded as failing to identify what audiences are looking for. Thus, it would be unfair to include an identifying process in the deficit model because the communication should not be about recognising or guessing what the public needs. The report mentioned that as science communication passes through the media, messages become distorted. However, social media helps us track their origin as well as allow science social influencers to communicate directly to the public. Direct communication does not guarantee that people will have the same interpretation or perception. If it is claimed that the mainstream media distort messages, social media is an option to retain the original communication. The deficit model is also claimed to be insufficient to encourage the public to make decisions. This is partly correct if applying the model to complex science issues where the public do not receive all the information due to political agendas, e.g. building nuclear factories. The one-way communication of debunking rumours only corrects false beliefs and possibly increases science knowledge by learning from food rumours.

Even though the deficit model is criticised for being old-fashioned, failing to identify needs or having been distorted by the mainstream media, it is still implicit in Thailand. This is because it can be the first step of science communication by providing knowledge. It helps the public to establish the truths that are important to their lives, since there are many issues where official institutions cannot take all of them into account. The debunking of food rumours has shown that science communication can be simplistic, and

it connects well with the public to increase science knowledge. It can be said that debunking food rumours has established more science communication.

The second empirical chapter gives us the way each sector works on debunking and communicating science. It shows that each sector has their own way of communication. Some of them were collaborated, by creating the debunking content and publishing on social media. What people can learn from the interview is that social media provided huge support to developing science communication. People and the experts are having more interaction by social media. Although the content about science is useful, it would not catch as much attention as rumours or click-bait. Many sectors attempt to provide debunking and science knowledge as they should. This would remind online users to rely on verified sources by using the debunk-search tool wisely. The science content has regularly provided information and it is always ready to serve. The in-depth interviews give hope that scientific discussions can develop even better under the convenient online communication tools.

6.4 Experimental Survey: Trust

This chapter completed the last aspect of the study by carrying out a survey experiment on trust in rumours with two communicators: the government and a social influencer.

The experimental survey has collected valid results of 269 respondents by using a convenience sample of Thai Facebook users. I invited them to participate by posting the survey and tagging them to join it. The aim of this survey was to test trust in rumours and communicators. Messages from both communicators were examined to ascertain whether they had potentially different levels of trust. I selected the topic of 'soursop and cancer treatment' as a wish rumour and 'fake eggs' as a dread rumour. Both of them had been in discussion at certain times. Soursop had sold in markets, while the fake egg story

had repeatedly appeared three or four times in four years. The government and social influencers debunked both rumours using their own styles of communication.

The survey questions had two experiments of a wish and dread rumour, using the same set of nineteen questions. There were fourteen questions assigned to each wish and dread rumour equally and the other five were about socio-economic background. The first two questions of the wish and dread rumours asked participants whether they had known about the rumour beforehand and what they thought about it. The next question asked them to read the original message of the rumour and then to rate it in a Likert scale of trust for five sub-questions. There were four questions that were randomly given to participants and they had to answer only one of them. The four questions consisted of four conditions of debunking. The first condition was the original debunking message from the social influencer. The second was the original debunking message from the government. The third and fourth conditions still used the original debunking messages; however, the sources of the messages were swapped between the social influencer and the government. This helped to investigate whether the impact of the messages or the communicators played roles in trust. After the participants read the debunked messages, they rated their trust for eight sub-questions in a Likert scale.

The results were broken down into twelve hypotheses, using SPSS to analyse the results, mainly to compare means in order to establish mean scores of trusts. According to my assumption, the social influencer should receive a higher trust score from the public because he has close communication with them, using social media and speaks individually by request. However, the results of the experimental survey did reject many hypotheses, showing that social influencers do not have higher trust, even though they are closer to social media users than the government.

The results of the experiment show that the government tends to receive slightly higher trust scores compared with social influencers. However, with the tiny difference in the scores, it can be deduced that social influencers' messages are also reliable sources. After people had read the debunked messages, they were still unsure and tended to trust both the social influencer and the government. Besides, the average score of trust from participants was still in between agreeing and disagreeing. This means that they do not rely fully on the government or social influencers, as well as that they are able to make a decision even with more information.

Interesting results came from the participants who partly knew about the rumours beforehand in a wish rumour, ranking the highest in trust. This could mean that people holding half of the information are likely to believe in it as the trust fills up their understanding.

The mean scores of trust in the four debunking conditions did not show significant statistical differences. However, they showed that the messages from the social influencer sourced by the government received the highest score. This indicates that communication would be better if the government adjusted it to be less formal and added simple explanation. Age is the factor that explains difference in trust. An increase in age meant a decrease in trust in the rumours.

What I have learnt from this experiment survey is that people still rely on the government about health issues. The literature explains that trust refers to the expectation that the message should represent truth and reliability. The source should provide accurate, objective and complete information (Ren and Levine, 1991). The government has stated clearly that the dread rumour is false as well as informing the public that they have investigated fake eggs. The message from social influencers are clear but it is more of a

scientific explanation. Therefore, it is sensible that the higher score leads to the government more than social influencer.

The study also shows that the person who does not have full information about a wish rumour will be likely to trust in it. The wish rumour, inducing people to have an unverified alternative treatment, is more harmful than the dread rumour as their sickness could become even worse. Since the trust score shows that government information still receives higher trust, it could be a positive development for the government to develop debunking and scientific communications and strategies. Social influencers can also continue communicating scientific analysis because they also have nearly the same trust score but the science content generally would not catch a lot of attention. However, the experts and the government still need to work on developing science literacy among the public.

Three outcomes; the coding of food rumour from Chapter 1, the resources of debunking rumour and science communication from Chapter 2 and the relationship of trust in rumours and debunks, hopes to add to the research of science communication and risk information. The results could help Thai people to consume social media information wisely and support them to increase their media literacy, which would be a long-term solution to any rumours.

6.5 Discussion – What do we learn from this study?

This thesis presents three empirical studies from cases of food rumours in Thailand. At the beginning, I developed this idea from what I have found on Facebook; that many people have followed and believed in false food rumours. I thought it was an important area of study because, as it relates to consumption, it endangers people's health and safety. I noticed that these kinds of messages have a similar composition, mostly playing

on emotions and making people scared and worried about their health. Thus, I have finally come up with categorising food rumours from 2013-2016 into themes, showing the composition of the food rumours. The purpose is not only to provide a comprehensive categorisation of rumours, but it hopes to give people clues in order to help them detect dubious and misleading content on the Internet. Since I have only seen a limited number of social influencers intensively debunking rumours, I decided to interview other stakeholders, especially government and media representatives as to whether they have worked on this issue. This is because food rumours are occasionally seen as a problem or an unimportant issue; while some of them were taken seriously, others have been neglected. I found that they are working on the issue as best they can, whilst still operating within organisational policy and guidelines. They are very active on social media and I found that they have pushed hard to provide accurate information to the public. Meanwhile, it must be said that although communication by social influencers does not reach the entire online population, their contributions have provided verified information about food to more people.

I decided to complete the last part by studying people and the extent to which they trust rumours and communicators. Using the experimental survey gives the result that people trust the government slightly more than they do the social influencers. However, they would place higher trust when the social influencer's message is sourced by the government. This result shows that the quality of science communication depends on the background of the audience, the public.

These three empirical studies show the relationship between information, science, communication and the public. At first, this study aims to categorise food rumours and draw attention to this problem. The goal is to raise awareness of food rumours and the

serious problems caused if people do not receive correct information while they are on social media. The information is not just a cycle of messages on the Internet, but something that would have been read, perceived, ignored, or followed. Online information has great impact, but sometimes the full impact is underestimated. Some rumours such as a political one may lead to a strong debate, but a food rumour would distort food consumption. Thus, a false food rumour would need speedier action before it gets worse. I have argued that food rumours misuse scientific statements in order to support the rumour and make it credible. Thus, the debunking of the rumour inevitably involves authentic scientific explanations. People may develop their knowledge of science when reading the debunking of the food rumour. As science, in general, is not accessible to everyone, science for the public needs to be linked to issues they are familiar with, to encourage them to have more understanding and interest.

With regard to communication, social influencers deliver the quickest debunking message. The interview data has shown that the government does not ignore this problem, they actually communicate the best, but regulations limit their communication boundaries. The rumours and debunks from all stakeholders show the dynamic of communication. The message is not only textual but many communicators create photo-texts (infographics) to catch the attention of the readers. The communication has been adapted to fit onto the smartphone screen. The period of the social media platform has narrowed the communication gap between media, academics, the government and the public. Highly competitive communication patterns have been used to catch the public's attention. This study shows that delivering information has become beneficial to business and those businesses that have strong financial support can push their message to reach the wider public. In addition, Facebook limits posts unless they are paid to boost them.

To avoid paying a lot of money for each single post, the contributor must develop interesting content to make people share it. As a result, there is intense competition among the media agencies to design and develop material.

Communication in this study concerns getting the debunking information to the public to help them have the correct facts. Even though they may not believe in the debunking, they should at least have read the information from more than one source. The communication also leads to the development of science communication becoming more accessible for the public over the social media platform. Science communication should not be limited only to scientists and social media have helped science communication to become more practical. All the science communication models still work and are up to date depending on which society we apply them to. The deficit model is not out of date, but rather it is a starting point to welcome the public to engage more in science and leads them to develop better science literacy. A greater public understanding of science would help people to distinguish between rumours and verified posts. The misuse of scientific knowledge in the rumour is normally not complex science. Rather, perpetrators often use those areas that are regularly misunderstood, for example, the infection of AIDS by blood and the use of formalin in seafood. Debunking has managed to correct this misunderstanding. The platform further supports science discussions between the experts and the public. The debunking is a starting point to let the public learn science from a case study. The experts and social media support the deficit model where they start to deliver accessible and corrected information.

Regarding trust and risk communication, the results have shown that people trust in both communicators. However, the results do not show the extent of which people have exchanged the information to interested parties. As the rumour debunking is based more

on informing than exchanging risk information, it seems to be just new information that the public accept and learn. This can be discussed on two points; firstly, people were long used to being informed within a top down structure rather than being involved in open discussion which online platforms allow. Now related agencies can see how the public reacts to rumours, and if they believe them. It has provided a space for people to listen to each other. The scientist from the interview insists that he expects the public to argue more rather than just accepting what he says; the wish is to encourage them to develop their scientific skills, starting from thinking and questioning. However, the change among the public must be developed gradually. Secondly, inputting accurate information online has been a good start to develop discussion around risk. Thus, it is not wrong to use the top-down communication online since people still trust it. The results do not show much difference in levels of trust between the social influencer and the government; both earn nearly the same level of trust. It could be said that these two sources are accepted by the public.

The definition of risk communication in the literature review is varied but Plough and Krinsky (1987) argue that it should be applied to broader issues, not only to health or environmental risk. Food rumour issues form part of risk communication since all online data issues represent a new type of risk resulting from information technology. Any online statement from whatever source can lead people to misbelieve information. Thus, the trust is not going to be from just one source, one social influencer or the government. The public will in time develop the skill to choose other correct trusted sources.

To explain food rumours in social amplification of risk, it is necessary to understand the concept of social amplification. The communication theory stated that amplification signifies the process of increasing or attenuating signals during the transmission from

source to transmitter and later to a receiver (Kasperson et al., 1988). The information source sends out a bundle of signals from a message to a transmitter or direct to the receiver (ibid, 1988). The receiver would perceive the sources and signal as a unit and draw inferences about the relationship between it (ibid, 1988).

However, messages have a certain meaning to those within a sociocultural context. The message may have factual, inferential, value-related, and symbolic meaning (Lasswell, 1948). Applying amplification to the case of food rumour and communication theory, amplification is produced by the social media platform, as it offers speedy delivery of messages through people already connected to it. The receiver can also be the sender, by forwarding the message to their friends and family. The rumour is amplified by its message, people, and the use of the platform. The risk is perceived differently but it can be assumed that those who share a post perceive high risk. If anyone has any issues that relate to the rumour, they may believe it to be true, for example a cancer patient is likely to believe in the alternative treatment contained in the rumour. Social amplification of risk is rather specific. It indicates the phenomenon that the information process, institutional structures, social group behaviours and individual responses, influence the social experience of risk and cause risk consequences (Renn, 1991). The social experience of food rumours as a risk can be discussed. The social experiences of food rumours began when people first started surfing the Internet. They started to process the information that should be true from the number of shares and queries about rumours in 2013-2016, though the number of shares slightly decreased later. This means that they have learnt to verify the rumours. Institutions in Thailand have worked more on technology crime support, not disinformation about general issues. There are no institutional structures currently working on this risk issue, as such, but there are various

actors now volunteering to take an action. Social action groups are active and it is clear that they are the people on the social media platforms reacting differently to rumours. A social action group, even one individual on the social media platform, will stand out depending on their personal background and their choices. In addition, a person will connect to friends who are likely to have things in common, for example, studying in the same school or university. They can choose their preferred sources which leads them to join groups that they want. If they choose to join communication groups based on unverified sources, they will have more chance to receive inaccurate information. On the other hand, people who follow official sources will be perceived as low risk. The individual responses should depend on single comments under the rumour posts. This study has not collected the responses to comments relating to the rumour. However, the tone of the people responding to the debunking showed that they are concerned about it. Some of them were linking over rumours about fake food in China. The social amplification of risk in the case of food rumours is subjective. People will perceive risk differently due to their science knowledge background to verify the accuracy of the message, their media literacy level, their own social media community, and their choice of online media.

6.6 Limitations

There are three aspects of the limitations. Firstly, the use of the Facebook platform is challenging for the collection of data. I have collected rumour content from personal Facebook accounts and the challenge came from the fact that some of the data had been missed because the search results are not properly shown in chronological order. I attempted to overcome this issue by re-searching and collecting published posts about

food rumours under the timeframe of 2013-2016. That is to say, the entire data set could not be completely collected due to the limitation of the Facebook platform.

The second limitation is in the selection of interviewees from the sectors relating to the food, health and media in order to gather as much valuable information as possible. However, not all of them have worked on food rumours. This influenced the way I questioned the interviewees because I had to adapt the semi-structured questions to match the characteristics of the interviewees. My solutions helped the interview flow. However, there is no verified organisation working in debunking food rumours except the social influencers and Sure-Korn-Share TV programme. The most relevant government sector is the Consumer Empowerment Division; however, they mainly focus on food supplements, beauty supplements, weight loss and so forth. The information gained from the interview is valuable, but it must be applied when doing analysis. The third limitation comes from the experimental survey. I aimed to study Facebook users because it can be assumed that any of them could have experience of food rumours. This results in the convenient use of sampling from my personal account that helped to collect respondents quickly. However, the results show that my sampling has not been well distributed due to the high number of respondents with similar or mutual backgrounds. This could be improved in any future study.

6.7 Suggestions for Further Research

The results of this study have contributed to theoretical implications in several aspects. First is the use of Facebook as the focus of the study. It has been studied in a limited framework: the privacy of Facebook use, the motivation of using Facebook or the role of Facebook in social interaction and so forth. Furthermore, it involves study into deeper aspects concerning the relationship of users and news sharing. However, this thesis has

furthered the study of Facebook by analysing the 'message' on Facebook using content analysis to code and analyse text data. However, the Facebook platform does not allow all information to be seen because of the personal privacy settings. As a result, the data has been collected only in the public posts which have been adapted to make the data as valid as possible. In addition, the data collection of the study has used public information and set up the timeframe to locate the period of data to be collected. Nevertheless the Facebook study could be developed further.

Secondly, it is about science communication. Science communication has been applied in the social media platform. Thus, it should have made it simpler, as the online platforms have already involved public. Science communication is traditionally where experts exchange scientific research and is still essential, but there should not be any judgment made of the public that they are not capable of comprehending science knowledge. The online platform offers more opportunities to discuss science issues. This leads to the public becoming a part of the science communication to implement their equal contribution to science activities.

Risk communication has been defined as an exchange of information, in other words, the circulation of evaluation of risk between related agencies, for example the government, media agencies, professional organisations and so forth. Even though the related agencies have included individual citizens, the other definitions of risk communication show that the communication is not fully open to the public as in a "purposeful exchange of the interested parties". There is still a slight boundary with the public. This study would contribute to thinking that risk communication should be open and offer greater capacity for the public to be involved. The risk issues start from the fingertips on the smartphone screen. Overall, both science communication and risk communication should consider the

term communication in relation to the public, making it simple, open and more accessible to them.

The last contribution is trust, linking to the communication. Trust in the information should be based on official sources. Even though the social media platform is full of false information, it is able to offer the correct information from the official sources that have created their social media account. Trust, at this point, derives from valid information with reliable evidence, as well as being delivered by trusted persons such as government representatives and academics. What makes it different is not the information itself, but the way the communicator speaks. The experimental survey in Chapter 5 shows a slightly higher score of trust when the government speaks the social influencer's words. This shows that the styling of words and content count. People would need the content to be less official in style but still based on truth. Among many online official accounts, the understanding of the audience would be the essential to design the communication that matches them. Thus effective and valid information delivered by a trusted person would lead to strong trust in the information sources.

Future research would further explore other types of rumours, especially historical food scandals from China and the perception of fake items. The study could explore the relationship between food rumours and health problems in Thai people. The question that should be passed to the policy makers is how the solutions to the unverified information can be improved. This thesis provides the analysis and solution coming from social media users. Even though there is a solution being worked on by the government health sector, it does not cover all the online disinformation.

Unfortunately, Thailand has experienced several issues over disinformation and misinformation, especially on issues of politics. Twitter and Facebook have closed several

networks due to attempts by the Thai army and politicians to deceive people (Bangkok Post, 2020). This thesis concerns the attempt to protect people from false information. It would be a huge challenge and a tough task if the government itself created false information. However, I expect that government concern for accurate information on food would reflect its prioritisation of health safety. Finally, I hope that more studies on rumours would support the strength and growth of media literacy among people, which is of fundamental importance in the world today.

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Appendix A (RUMOUR)

No.	Meaning Unit	Condensed meaning Unit	Code	Category	Theme
1	If a person has prawns together with vitamin C, it will transform from As205 (non-toxic) to As203 (toxic) known as arsenic. Arsenic can cause dysfunction of Capillaries and Sulfhydryl-containing enzymes leading to Thrombosis in Liver, Kidneys and Intestines, skin cells death and peripheral vasodilation. As a result, this can cause death due to rectal bleeding. During vitamin C intake, avoiding prawns is compulsory	Eating Prawn and vitamin C cause arsenic. Toxic from arsenic can cause sickness and lead to death	Sickness and death from eating prawn and vitamin C	Sickness claims	Caution
2	The Thailand Research Fund warns not to use water from soaking Shiitake, a native East Asian mushroom, which is contaminated with carbon disulphide as it is used for washing rust. If it has direct contact with skin, it can cause severe skin irritation. With too much contact, it can cause respiratory failure. Intensively, long-term accumulation in the body can lead to neurodysfuntion and psychotic symptoms.	Not using water from soaking Shiitake because it contaminated with carbon disulphide leading to serious sickness	Serious sickness from Shiitake	Sickness Claims	Caution
3	A true story about eating crispy seaweed: 'My friend's daughter is addicted to crispy seaweed snacks. She ate the snack in the morning before going to school, lunch and in the evening. After having been addicted for over 6 months, she told her mother that her eyesight was not clear and more importantly she felt achy around the waistline. At first, my friend thought that her eyes might be short-sighted so I did not think about it too much but still took her to the ophthalmologist to see if she needed glasses. However, it turned out her eyes were normal. Later, my friend brought her daughter to see the doctor to check on her waist pain. The doctor said this could be from her gymnastic work-out so she was prescribed a pain killer. After two months, her daughter continued eating crispy seaweed. One day she told her mother that her vision was very blurry and repeatedly happening with diplopia. The pain around her waistline was like stabbing from the inside. She also claimed that the medicine did not ease the pain. Finally, my friend decided to take her daughter to hospital for body check-up. Very shockingly, the result came that the iris of her eye was lost and the eye lens were degenerating rapidly. Her internal pain around the waistline was diagnosed from	My friend's daughter addicted to crispy seaweed. She starts to have sickness. The doctor misdiagnose. She continue eating seaweed. She had more sickness and it is totally shocking It is because of too much salt and MSG. Seaweed is full of toxic. It will remains if processed less than 2 hours under 1000 degrees.	Serious sickness from crispy seaweed. It is full of toxic.	Sickness claims Hazardous claims Story	Caution

	<p>kidney failure. All in all, the symptoms were affected by too much intake of salt and MSG from her seaweed consumption for a long time.</p> <p>The doctor explained that seaweed is a water plant that relies on absorbing all substances in both fresh and sea water. In other words, seaweed is full of toxins.</p> <p>If it is processed for less than 2 hours under 1000 degrees, the toxicity still remains. And when the seaweed is in the food drying process with salt and MSG being added, it will be extremely toxic. If people consume it, it would increase the toxins in their body which consequently causes the damage to inside organs. Apart from that, the crispy seaweed may also be contaminated with chemicals and low quality oil through non-standard manufacturing from China. Therefore, it is good to spread the news for a good cause.'</p>				
4	<p>Please spread this news to all who you love; spouse, partners, children and colleagues. Leaving a plastic water bottle in the car is really dangerous! In the TV show Ellen, Sheryl Crow said that she had breast cancer because of having high rate of dioxin. Women should not drink any bottled water that has collected heat in the car. The heat will interact with chemical from plastic by releasing hydrogen into the water. Dioxin is a toxic found in tissues of breast cancer. Therefore, please be aware of it.</p>	<p>Plastic bottle in a car is dangerous because it has high rate of dioxin, causing breast cancer.</p> <p>The heat interact with chemical and release hydrogen.</p>	<p>Serious sickness from drinking water leaving heat in a car; breast cancer</p>	<p>Sickness claim</p> <p>Science statement</p>	<p>Caution</p>
5	<p>Buying chopped fruits – Caution – chopping by yourself is better Level of importance : High</p> <p>This happened in Singapore, Water Loo Rd. A 10-year-old boy ate pineapple 15 days before he was ill. Once he came to see the doctor, he found that he had AIDs. His parents did not believe it so they decided to go for further diagnosis. The parents were not infected. The doctor diagnosed the boy again and asked him whether he ate something. The boy said “yes”, it was pineapple in the evening. Suddenly, some people went to the fruit seller to investigate and found that the seller was bleeding and the blood was spread into the fruit. The seller was diagnosed and had been infected with AIDs. Unfortunately, the boy was accidentally infected. Please be aware of buying street food and forward this to your beloved ones. Please</p>	<p>A boy infected HIV because eating fruits from the seller bleeding into it.</p> <p>Be aware of buying street foods</p> <p>Please forward this message</p>	<p>Serious sickness from eating bleeding fruits</p>	<p>Sickness Claims</p> <p>Story</p>	<p>Caution</p>

	forward this to anyone you know. Your message can save someone's life.				
6	<p>I am going to tell about the food that we eat everyday as my friend's father went to the conference about cancer. Now Thailand is ranked number one death rate on cancer patients with 1 per 8 people dying. This is because of;</p> <ol style="list-style-type: none"> 1. Eating grilled meat 2. Eating meat left overnight which contains coconut milk, such as green curry or spicy curry. Meat causes carcinogen. If you cannot finish the food, do not keep it and re-heat it. You have to finish it within a day. 3. Fried banana, stop eating it. Flour that covers banana when frying can cause carcinogen. The other food to avoid is Chinese doughnuts and Coconut cream cake. 4. Fried vegetables; if you cannot finish it, please leave it. Do not re-heat it especially mixed vegetable soup. It is very dangerous. Do not eat. 5. Sweet-gravy in duck, sweet-gravy in goose, and pork belly. You can still eat if it is not left overnight. If it is left overnight, you need to leave it because it takes 2 days to digest but the meat can only stay fresh for a day. <p>If the meat is in the stomach, it is rotten in the stomach which causes the Colorectal cancer. Overnight fried vegetables can produce bacteria and virus. If eaten, the bacteria and virus will be in the stomach and it will then cause cancer. The meal with fish can keep fresh only in a day. Between nights, the fish can also have bacteria and virus. Once the fish is reheated, the bacteria and virus will remain in the stomach. Any leftover food from the shop should not be consumed whatsoever because it is an overnight food. If you are going to eat street food, you need to only find any shops that cook fresh every day. In short, eat fresh, don't eat overnight food. Do not regret not buying it or to consume it again. Having cancer will be very costly and affect not only your physical health but your mental health too.</p>	<p>5 reasons why Thailand ranks the top cancer death from my friend's father. They are about eating overnight meals, grilled meat, fried foods, and pork belly.</p> <p>Rotten meat in the stomach cause cancer.</p> <p>Bacteria and virus remain in the stomach.</p>	<p>Serious sickness because of eating 5 types of food</p>	<p>Sickness claims</p> <p>The use of statistics</p> <p>The making of closed relationship</p>	<p>Caution</p> <p>The making of reliability</p>
7	Eating durian with a fizzy drink is as poisonous as cobra venom. There is a 28 year-old Chinese tourist who came to travel to Thailand and ate a lot of durians followed by drinking fizzy drinks. Caffeine in	Eating durian and frizzy drink cause high blood pressure and heart attack.	Serious sickness about eating	Sickness claims	The use of science statement

	<p>the drink can cause sudden high blood pressure and even a heart attack. Thailand has a law that after eating durians, one must not drink fizzy drink (Coca-Cola) within 8 hours!!!</p>	<p>Caffeine causes high blood pressure and heart attack</p> <p>It is a law in Thailand prohibiting to eat it.</p>	<p>durian and fizzy drink</p>	<p>Science explanation</p>	<p>Caution</p>
8	<p>8 Dangerous foods when eating on empty stomach! Do you know when your stomach is empty and you eat food, it can cause health problems. As a result, before eating foods, you should choose types of food. You should not eat some foods when your stomach is empty. It is unbelievable that some food must not be eaten.</p> <p>Banana Banana is full of magnesium. Eating banana when having on an empty stomach will increase the level of magnesium while decreasing calcium and magnesium. It will stop the work of the cardiovascular system and blood vessels, which is dangerous for your health.</p> <p>Garlic Eating garlic when having empty stomach can cause Gastritis.</p> <p>Vegetables Eating only vegetables can affect the stomach's working system.</p> <p>Milk and soy milk Even milk is full of protein but it is effective when there is carbohydrate in the stomach. Thus, it should not be eaten when having empty stomach.</p> <p>Alcohol Drinking alcohol when having an empty stomach will irritate and can cause Gastritis.</p> <p>Sugars or sweets</p>	<p>8 dangerous common foods not to eat when the stomach is empty. Otherwise it will cause sickness.</p> <p>Banana, Garlic, Vegetables, Milk, Alcohol, Sugar, Tea and Persimmon</p>	<p>Serious sickness about eating 8 common foods</p>	<p>Sickness claims</p>	<p>Caution</p>

	<p>We should not consume any sugar and sweets such as fizzy drink, chocolate when having an empty stomach because protein will combine with sugar affecting the absorbing system of all types of protein and decrease the effectiveness of the blood circulation and kidneys.</p> <p>Tea Over steeping tea will dissolve salt acid in the stomach which decreases the effectiveness of the digestive system. It can cause heart shaking, heart palpitations, headaches and loss of energy and concentration.</p> <p>Persimmon Do not eat persimmon when having an empty stomach because it will release too much salt acid. Once the acid is combined with suspended matter in persimmon, it can cause chest pain, feeling queasy and peptic ulcer.</p>				
9	<p>Tricky China, making a fake egg less than 1 BHT. (currency)</p> <p>It is found that a fake egg is sold in many cities in China. The doctor said that fake eggs can slow down human's nervous system and other parts of the body. There are a number of fake products throughout globalisation and fake eggs are one of those which was rumoured in selling at a price of less than 1 BHT. The fake egg can be eaten like a real egg.</p> <p>The rumour was recently revealed yesterday (22 July) on the Internet that China had warned since last July about the fake egg consumption after one of the newspapers in China reported on 14 February about selling such fake eggs. The news about the fake eggs wakening the nervous system was widespread in China.</p> <p>4 years later after the fake eggs had been found; a Chinese local from Fujian bought fake eggs from a local seller and later found that a yolk part turned out to be a strangely bright colour after cooking. After that, an inspector came to investigate a shop in the same area. The seller rejected that there were fake eggs being sold and that the eggs came from Liewning. However, fake eggs were found having no</p>	<p>China makes fake eggs. It will effect nervous systems.</p> <p>The description about how fake eggs looks like.</p> <p>The lecturer from Hong Kong University explains about the chemical claiming that it used in fake eggs.</p>	Fake food in China	<p>Hazardous claims</p> <p>Science explanation</p> <p>Chemical words</p> <p>Academic Claims</p>	<p>The making of reliability</p> <p>The use of science statement</p> <p>Caution</p>

	<p>protein, rather it contained other substances such as alum, sodium alginate, gelatine, calcium chloride and sodium benzoate while the yolk was dyed with salt or tartaric acid which is normally used in making bubble drinks that are popular in Asia, or the photography and leather business. An eggshell was made of calcium carbonate. There were no rumours about the fake eggs made in Hong Kong.</p> <p>Consuming aluminium, which contains alum for a long period, a Chinese doctor, Lo Wing Lok, said that it could slow down the nervous system. For the ingredients to make the fake egg which was not soluble such as calcium, the body can eliminate it through digestion. The health risk was low unless there was a large amount was consumed or was consumed at a frequent rate. Other news reports said that fake eggs were easy to make with the lower cost of less than 20 Satang (.04p), compared with the real egg, which was 1-2 BHT (2p). Moreover, there was a lot of Chinese websites showing how to make fake eggs. Some institutions opened a course teaching how to make fake eggs.</p> <p>Assoc. Prof. Ying-Sing from the department of Chemistry at Hong Kong University said that sodium alginate and gelatine is used for solidifying food, while calcium chloride is a substance for drying and alum is used to add moisture. Any contaminated substances could, however, harm the human body. Moreover, the spokesperson from the food safety organisation said that Hong Kong imported the egg from Liewning but the seller from the local area denied and claimed there were not any fake eggs in the area.</p> <p>The spokesperson also said that imported eggs from China should come from farms and factories registered and certified by the food safety organisation. The news reported that the fake eggs were found in Chen-Du county in Beijing in 2007 and Kwang Cho in 2005. The experts said that fake eggs have a clear white eggshell and they do not have any fishy smell, unlike real eggs. If shaking fake eggs, you can hear a sound of water inside.</p>				
10	Pak-Kood (an edible type of Fern) is the richest in carcinogen especially the tip of the vegetable. Japan and many other countries have researched and announced that before eating Pak-Kood it is	Pak-Kood is having a high substance to cause cancer.	Thai vegetables have the	Hazardous claims	Caution

	<p>required to be scalded in boiling water in order to decrease the carcinogen. However, the carcinogen still remains. It is advised that avoiding Pak-Kood is the best way. Please forward this information to others. Additional information can be found in English, Chinese, Korean and Japanese. There is none of this information found in Thailand. My brother found it by accident.</p>	<p>It has to boiled to decrease this substance</p> <p>The additional is not found in Thai language</p> <p>My brother found it</p>	<p>substance causing a cancer</p> <p>The information is accidentally found and it is not in Thai language</p>	<p>The sound of hidden agenda</p>	<p>Emotional Plays</p>
11	<p>Ripened banana will have a substance called TNF (Tumor Necrosis Factor) which help against the abnormal cells. The riper the banana the more black spots they wil have. More black spots means higher rates of immunity.</p> <p>The research from Japanese scientists found that bananas have TNF which helps against cancer. The riper the banana is, the better it can fight off cancer.</p> <p>There was a Professor from the University of Tokyo who did animal testing to compare the benefits among different types of fruits; bananas, grapes, apples, watermelon, pear and persimmon. The result shows that banana is the best among those fruits at producing white blood cells which increases body immune system and TNF.</p> <p>The advice from the Japanese Professor is 1-2 bananas should be eaten daily to increase body immune system that can fight against many diseases such as flu and others recommended by the professor. The yellow banana with black spots on is 8 times more effective at increasing white blood cells than the green banana.</p>	<p>Ripen banana has a substance claiming that it gives higher immunity.</p> <p>It refers to the research from University of Tokyo.</p> <p>It claims that black spots in banana has 8 times more of increasing white blood cells.</p>	<p>Ripen banana with black spot can increase immunity.</p> <p>It mentioned about research from University of Tokyo</p>	<p>Treatment Claims</p> <p>Academic Claims</p>	<p>Hope</p> <p>The making of reliability</p>
12	<p>If I had had this secret message 25 years ago, I would have still had my mother with me.</p> <p>To transform lychee seeds into medicine is very easy because my house has grown lychee trees for over 50 years. I have never known that it is a magic medicine to cure renal disease. My partner had suffered from kidney dialysis for over 14 years and died afterwards.</p> <p>A lot of Taiwanese patients in Taiwan have to do kidney dialysis. Kidney dialysis is required because the kidney cannot excrete body</p>	<p>Lychee seeds transform into medicine.</p> <p>Drink Pork Kidney soup helps passing urine comfortably.</p> <p>The doctor is surprised.</p>	<p>The magic recipe made from lychee seeds and pork kidney, claiming as it helps not to have kidney dialysis.</p>	<p>Magic recipe</p> <p>Treatment claims</p> <p>The sound of hidden agenda</p>	<p>Hope</p> <p>Emotional plays</p>

<p>waste. If your friends and family have kidney dialysis, please forward this message as much as you can. It is a huge benefit. Whoever tries it, it will bring good results. Helping one person means helping a whole family. I have a renal disease because I have diabetes for over 20 years. This suffering makes me want to end my life and kill myself. But I realise that if I escape from it, my descendants will take the suffering from me. Some of them are still studying. So I decide to continue doing kidney dialysis. Some people give me magic medicinal recipes but I always reject them. I still believe in the doctor and keep doing kidney dialysis.</p> <p>I thought about Chinese proverb “Horse is death; please think that we can cure alive horse”. Somehow I still have a hope. After I had the second time of kidney dialysis, my aunty came to visit me and asked me about secret medicinal recipes which claim that I no longer needed kidney dialysis, so I agreed.</p> <p>In the afternoon, my aunty brings 1 pot of Tseng Chi soup (Pork’s Kidney soup) to drink twice daily. The second day she brought another pot, plus a half piece of Tseng Chi (Pork’s kidney) to eat. It turned out that I could pass urine more comfortably. The third day is the day that I had to do dialysis but the doctor said I did not need to do it. I drank the soup for a week and went to see the doctor again. The doctor was surprised and informed me that I do not need to do the dialysis anymore.</p> <p>The magic medicinal recipe is. Crush 7 lychee seeds and cover with a white cloth. Cut 1 Tseng-Chi in thin slices and rinse with water. Cut the white gut of the Tseng-Chi out. Put 2 bowls of rice water that has been washed twice, into the rice cooker Steam for 30 minutes Drink it all at once.</p> <p>I do not need to do kidney dialysis because of this magic medicinal recipe. Everyone please forward this to whoever that has kidney dialysis to recover from it. It will be a huge benefit.</p>	<p>The recipe to kidney dialysis from lychee seeds and pork kidney.</p> <p>All is the secret.</p>			
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13	<p>Breaking News! Ministry of Health announced that canned fruit, such as lychee, longan, truffle, rambutan and mangosteen and others, is prohibited. They have been removed from store shelves because there were 200 people infected with HIV who have been brought into the fruit factory whose blood dropped into the canned fruit. The Taiwanese Food and Drug Administration found it and reported it to Thailand. Please forward and share this message.</p>	<p>200 HIV infected people dropped the blood in canned fruit.</p> <p>Ministry of Health removed canned fruit from the shelves.</p> <p>Taiwanese Food and Drug Administration found it</p>	<p>Canned fruit infected HIV.</p> <p>Confirmed by Taiwanese Food and Drug Administration.</p>	<p>Hazardous Claims</p> <p>Institutional Claims</p>	<p>Caution</p> <p>The making of reliability</p>
14	<p>Do you know how to boil instant noodles..! Let's see how to boil it correctly.</p> <p>In general we put the noodle together with the seasoning in the water, and boil it for 3 minutes. This is an incorrect method because it can change the seasoning into something toxic. Thus, the noodle is covered with wax and combined with seasonings it will become toxic when boiling for 3-4 minutes in the hot water. It takes 4-5 days for the wax to be digested.</p> <p>This is the right way to do it:</p> <ol style="list-style-type: none"> 1. Put the noodle into boiling water; 2. After the noodle is cooked, rinse off the water (to get rid of seasoning with wax); 3. Boil the water again and put the cooked noodle into it (turn off the gas); 4. Add the seasoning while the soup is hot (the seasoning will not become toxic again); 5. If making dry noodles, rinse off the water and seasoning before eating. <p>Please quickly change the way you cook instant noodles and follow this way as soon as possible for your health.</p>	<p>Do you know how to boil instant noodle!</p> <p>Boiling an instant noodle by putting a hot water into a cup is wrong method because the noodle will covered with wax in a cup and become toxic.</p> <p>The correct method to boil instant noodle.</p> <p>Please change the way to do it.</p>	<p>Hot water will combined with the wax covered in instant noodle cup and become toxic.</p>	<p>The use of exclamation signs.</p> <p>Science explanation</p> <p>Hazardous Claims</p>	<p>Emotional playing</p> <p>The use of science statement</p> <p>Hope</p>
15	<p>Hat Yai News Center – Agriculturist from Songkla province has got an idea of making water from bamboo after testing and developing for over 3 years based on Sufficiency Economy. Pure bamboo water</p>	<p>Pure bamboo water helps remove stones and toxic from the body without seeing a</p>	<p>Drinking Pure Bamboo water removes stones and toxic.</p>	<p>Treatment Claims</p>	<p>Hope</p>

<p>helps remove stones and toxins from the body without you having to see a doctor.</p> <p>Today, 21 Oct. Mr.Kamnueng Nualmanee, a 50 year old agriculturalist from Songkla, has been doing agriculture by following the Sufficiency Economy concept. He has invented a lot of new techniques, bringing up the benefits from his plants and increasing more incomes. The interesting one is pure bamboo water which has been tested for over 3 years. The pure bamboo water has a lot of benefits but it is still not widely known. It can remove toxins from the body and kidney stones. The water can be also used for rinsing vegetables, washing your face and drinking.</p> <p>Mr.Kamnueng explains about the water that it can be any type of bamboo aged over 3 years. We use a knife to cut the tip to be like a shark's mouth shape and 3-4 inches from the joint, cover it with a plastic bag and tie it up. This process has to be done between 1am and 3am only because it is the time that the bamboo absorbs water. We have to remember to cut the bamboo only once per one bamboo in order to make it release the most amount of water because its roots are connected to each other. The bigger cluster of bamboo, the higher an amount of water that can be released.</p> <p>Collecting the water should be done between 6am and 7am to get pure water. The most cautious point is during the cutting the top, we have to make sure not to crack the trunk because the water will not come out in the cut area, but it will leak in the cracked area. 1 cluster of bamboo would give about 3 to 4 litres of water depending on how strong the bamboo is and the weather condition. Humid weather helps bamboo release more water. His farm can make 20 to 30 litres of water.</p> <p>He usually brings the water to drink with family and to sell it. The price is 1 litre for 50-60 BHT (1GBP). Any agriculturists or people can make it. Its benefit is similar to magic water because it is very pure by removing kidney stones. Drinking the pure bamboo water for 1 to 2 weeks can make kidney stones go without any treatment.</p>	<p>doctor after drinking for 1-2 weeks.</p> <p>An agriculturist invent pure bamboo water, claiming as having a lot of benefits, removing kidney stones.</p> <p>He develops it following from Sufficiency Economy.</p> <p>The making of pure bamboo water has to be done in specific time.</p>	<p>It does not need to see the doctor after drinking it.</p>		
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16	<p>Please share, we need to stop eating pork, chicken and duck for 6 months because pigs in the farm at Nakhon Prathom province have been infected with HIV. Over 1,000 Pigs, chickens and ducks died. The owner of the farm said that people should eat prawn and fish instead for a while. However, meat balls, sausages and hotdogs also need to be avoided for consumption. My friend said it is urgent. CP (one of the Thai food companies) is trying to hide this issue. Pigs and Chickens are infected. Stop eating for 6 months otherwise you will die in 9 days. 7 CP workers are dead.</p>	<p>Stop eating pork, chicken and duck for 6 months because the pigs in the farm have been infected HIV.</p> <p>It also includes meat balls, sausages and hot dogs.</p> <p>My friend said it is urgent.</p> <p>CP company tries to hide this new.</p> <p>If you do not stop, you will die.</p>	<p>Stop eating pork, chicken, and ducks and related processed products because the pig in the farm is infected HIV.</p> <p>The information has been hidden.</p> <p>It is urgent.</p>	<p>Hazardous Claims</p> <p>Sickness Claims</p> <p>The making of closed relationship</p>	<p>Caution</p> <p>The making of reliability</p>
17	<p>From the note about how 20-year diabetes can be gone. Some people ask me what 'boiled water with chilli stalk' is.</p> <p>I plan to write this next week because I am very busy but I can write it now because there are some people asking me.</p> <p>My father has had diabetes for over 20 years and ischemic stroke at the level of paralysis, but he can recover from it. It is surprising that his kidneys have never had any problems despite the fact that diabetic patients are likely to have problems with kidney failure.</p> <p>My father told me to write in my blog that he got Chinese herbs formula for kidney dialysis from his friend 15 years ago. He continues following this formula.</p> <p>The step is as follows.</p> <ul style="list-style-type: none"> - Washing chilli stalk (can be any type of chilli) and leave it dry. - Take a handful of the chilli stalk; boil it with 3 glasses of water until the water is reduced equivalently to a glass of water and drink in the morning. - Repeat boiling again for drinking in the evening and keep drinking for 7 days every 6 months. 	<p>Boiled water with chilli stalk helps diabetic treatments and kidney dialysis.</p> <p>The story of the writer's father having diabetics for over 20 years.</p> <p>The making formula of boiled water with chilli stalk.</p>	<p>Boiled water with chilli stalk can help diabetics and kidney dialysis and the recipe formula.</p>	<p>Treatment Claims</p> <p>Magic recipe</p>	<p>Hope</p>

	The result shows that the urine colour will be cloudy yellow. After that the colour will be clearer.				
18	<p>Coriander for cleaning kidney. This is superb. Please share now! This is an easy way to cleanse your kidney.</p> <p>Kidneys have a function of filtering out the excessive salt and toxins in food. Thus it is the time to cleanse kidney with a low budget at 100 THB (2GBP) by using coriander.</p> <ul style="list-style-type: none"> - Wash the corianders and chop into small pieces. - Boil it for around 10 minutes. - Filter the coriander out and keep the water into the fridge. - Drink 1 big glass per day. <p>Some people can blend the coriander and drink it immediately in the morning. You can feel the difference by noticing the urine. You will feel so fresh like you never had it before.</p>	<p>Corianders can clean kidney.</p> <p>The making of corianders to drink.</p>	Corianders can clean kidney.	<p>Treatment Claims</p> <p>Magic recipe</p>	Hope
19	<p>Food Therapy</p> <ol style="list-style-type: none"> 1. Drink hot water, keep all sickness away. 2. Eat 1 egg per day, keep doctors away. 3. Stop eating sugar, it is the cause of many sickness. 4. Eat durian helps killing cancer and keep young. 5. Eat watermelon, relieve blood clots and have a haematic effect. It enhances sexual capability in males. 6. Women who eat pineapple tighten Vagina. 7. Eating bananas is good for liver, kidneys, skin, eyes, bones especially a person who works in front of the computer. It also increases the size of breasts. 8. Burning banana peels help headache, fever and diabetes. 9. A child who eats banana will have a good memory and banana also helps adjusted hormones among menopausal women if eating with coconut water. 10. Drinking virgin cold pressed coconut oil and using for face is anti-aging and also helps remove melisma and freckles because virgin coconut oil is the based ingredients in all cosmetics. 	<p>The list of food therapy. Drinking and eating food to stay away from sickness.</p> <p>The list mentions all common food.</p>	The list of food therapy.	Treatment Claims	Hope

	<p>11. Pork lard cooking oil is the best oil.</p> <p>12. Eating red onions, onions, garlic followed by sliced lime removes unwanted smells and decreased HDL in blood. It is much better than pills which have side effects.</p>				
20	<p>Do not spoil yourself eating. It is likely to get a tumor.</p> <p>A woman who received a cyst removal surgery, the cyst removed was filled with low-oxygenated blood. She thought that she would be better after the surgery, but that was wrong. There was a relapse cyst after 2-3 months later. Urged by her concern she immediately went to see the specialist.</p> <p>During the consultation, the doctor asks her a question which makes her surprised whether she often eats a lot of chicken wings. She said Yes and wonders why the doctor knows this. The doctor explains that the truth is chicken is injected by steroids in order to accelerate the growth to feed humans, despite the fact that injecting steroids instead than feeding, is not necessary.</p> <p>Most of the steroids are injected to chicken heads or wings. Therefore, it is the spot where a large amount of steroids are accumulated. These substances are highly hazardous to your body, it accelerates the growth and also it affects the female hormone function leading to the growth of the cyst in the uterus. In conclusion we recommend you to control your diet and eat the least amount of chicken wings as possible.</p>	<p>A woman has cyst. The doctor diagnoses and concludes that she eats a lot of chicken wings.</p> <p>The chicken is injected by steroids in order to accelerate the growth.</p>	<p>The chicken wings is mostly injected steroids, probably cause cyst among women.</p>	<p>Science Explanation</p> <p>Hazardous claims</p> <p>Sickness Claims</p>	<p>The use of science statement</p> <p>Caution</p>
21	<p>Mr. Singkaew told about boiling the Pithraj leaves along with Bael can cure gout and renal disease which he is cured of by himself by drinking his own boiled herbs. 4 months later he underwent his blood check and the gout parameter and renal parameter are both better and he didn't need a Hemodialysis. By simple understanding Bael leaves have the properties with acidulous flavour that can be used in bronchitis, phlegm, cold, rashes, and eye inflammation. Boiling the fresh leaves help with appetite, enhancing your body and normalizing your excretory system. Indian mulberry species contain 40,000 IU of Vitamin A per 100 grams and have properties that enhance eye performance, maintain cardiac workload and reduce fever in a form of nutraceutical product. Indian mulberry leaves can</p>	<p>Boiling the Pithraj leaves along with Bael can cure gout and renal disease which he is cured by himself by drinking his own boiling herbs.</p> <p>Boiling the fresh leaves help with appetite, enhancing your body, normalizing your excretory system. Indian mulberry species contain 40000 IU of Vitamin A per</p>	<p>Pithraj leaves along with Bael can cure gout and renal disease, and helps other sickness.</p>	<p>Treatment Claims</p> <p>The use of science statement</p>	<p>Hope</p>

	<p>be used as a medicine to reduce body temperature. Fresh leaves used to wrap meat to enhance its flavour and can be used as an ingredient in Hor-mhok (Traditional Thai food) or used to feed animals or silkworms. Also it can be used as herbal medicine, if its juice is squeezed out, it can be applied to pain medicine for gout patients who suffer from small joint pain such as in the fingers and toes, wasting disease or use as a louse killer shampoo. Also, its leaves can be used as blister wound medicines and for headache or fever, for pain, deep wounds, joint pain, fractured bones and muscle sprain. Its water extracts can be used for hypertension, internal bone fracture bleeding, stomachache, diabetes, loss of appetite, Urethritis, Abdominal swelling, hernia and Vitamin A deficiency. Its fruit is called "Noni" which contains a high amount of carbohydrate, fiber and Potassium and is low fat. He said that he made this formula on his own.</p>	<p>100 grams have a property in enhancing eye performances, maintaining cardiac workload and reducing fever in a form of nutraceutical product.</p>			
22	<p>Western people stop self-deceiving.</p> <p>US Ministry of Health removes Cholesterol from the list of food concerns. They said that there is no relationship between Cholesterol in food and Cholesterol in blood that our body processes.</p> <p>To conclude.</p> <ol style="list-style-type: none"> 1. We can eat more than 1 egg per day. 2. People aged below 50 can eat 6 eggs if they can afford it. 3. People aged 80 can eat 2 eggs for protecting Alzheimer's. 	<p>Western people stop self-deceiving.</p> <p>US Ministry of Health removes Cholesterol from the list of food concerns.</p> <p>The way to eat eggs wisely, protecting Alzheimer's</p>	<p>US Ministry of Health advise the right amount to consume eggs, protecting Alzheimer's</p>	<p>Institutional Claims</p> <p>Treatment Claims</p>	<p>The making of reliability</p> <p>Hope</p>
23	<p>I just know that yunic ice contains formalin to slow down its dissolving process. Water also has chlorine. Everyday Thai people consume death because we drink water every day. Ice has formalin to make it stay as cube. Every day people at eat ice. No wonder that Thai people died because of cancer. We are ranked the 1st of the countries whose people die from cancer.</p>	<p>Yunic ice contains formalin to slow down its dissolves. It also combines with chlorine in the water</p> <p>Thai people consume death. They rank 1st country died from cancer.</p>	<p>Yunic ice contains formalin. Water has chlorine.</p> <p>Thai people consume death, ranking the 1st country died from cancer.</p>	<p>Science Words</p> <p>The use of statistics or numbers</p>	<p>The use of science statement</p> <p>The making of reliability</p>
24	<p>Chief Executive of the Sub district Administrative Organization at Prae province has cancer at the last stage. After he drinks 'this water', his cancer is removed. Even doctors are surprised.</p>	<p>Shocking!!</p> <p>Soursop water can kill cancer cells found by Former Chief</p>	<p>Drinking soursop water can kill cancer.</p>	<p>The use of exclamation signs</p>	<p>Emotion plays</p>

	<p>Shocking!! Former Chief Executive of the Sub district Administrative Organization has the final stage of cancer. After his brother recommended him to drink 'soursop water' for 3 times a day, 20 days later, the doctor found that there are no cancer cells. The reports said that Mr.Pinij Sangsoi, a 52 year old lawyer revealed the truth that he feels like he has a new life. Since July 2014, he has been sufferering from the sickness. He decides to cure himself by the local knowledge of drinking soursop. Mr Pinij said that he feels something around inside his neck and it gets bigger. He decides to use natural treatment and eating herbs but it does not help. In December 2014, the tumour cracked and he quickly went to hospital. The doctor diagnosed that he has Lymphoma (Lymph gland cancer). After he went home, his family attempted to find a doctor specialising in cancer. Some people recommended a doctor in Chiang Rai province. At that time the cancer was spread into the lungs and liver and the doctor is still monitoring. He was hopeless after receiving the diagnosis as the tumour is getting bigger. His brother recommends me to boil soursop leaves and drink it. He feels hopeful and tried to find the leaves. Finally he found it and drank it 3 times every day for 20 days since February. The result is that there is no bleeding and the size of tumour is getting smaller.</p> <p>The latest is that he went to see the doctor again and he was surprised that the cancer of the liver and lungs is completely gone. His stage of cancer was back from stage 4 to stage 1. The doctor said it is unbelievable that he can be that better. He can work and drive as before. He still has to drink soursop until he recovers as normal. He insisted that his cancer was gone because of boiling soursop leaves. Since he drank it, he never took any pills because the pill can work against the soursop.</p>	<p>Executive of the Sub district Administrative Organization.</p> <p>His brother recommends him to boil soursop leaves and drink 3 times a day.</p> <p>His cancer state later goes back from state 4 to state 1.</p> <p>The doctor agrees that it is unbelievable.</p>		Treatment Claims	Hope
25	<p>22 foods which must not be eaten together</p> <ol style="list-style-type: none"> 1. Radish and Ear mushroom – Do not eat together, it will irritate your skin. 2. Tofu and honey – Do not eat together, it may cause deafness 3. Potato and banana – Do not eat together, it may cause Melasma 4. Radish and any fruits – Do not eat together, it may cause Goiter 5. Banana and taro – Do not eat together, it may cause flatulence 	<p>22 paired common food that must not eat together. Otherwise, it may cause sickness.</p>	<p>22 paired common food that must not eat together. Otherwise, it may cause sickness.</p>	Sickness claims	Caution

	<p>6. Sweet potato and persimmon – Do not eat together, it may cause gastric stones.</p> <p>7. Banana, papaya and watermelon – Do not eat together, it may cause kidney disease and diabetes.</p> <p>8. Potato and persimmon – Do not eat together, it may cause a urethral stone.</p> <p>9. Soy drink and milk – Do not put egg in, it may may cause a constipation and vasoconstriction</p> <p>10. Spinach and tofu – Do not eat together, it may cause a vertebral stone.</p> <p>11. Honey – Do not boil with hot water as it may cause a depletion of vitamins.</p> <p>12. Orange and lime – Do not eat together, it may may cause a corrosive injury in stomach.</p> <p>13. All fish – Do not cook with pickle, it can cause cancer.</p> <p>14. Pickled ginger – Do not put in the fridge, it can cause cancer.</p> <p>15. Soy drink – Do not add red sugar, it may cause a depletion of vitamins.</p> <p>16. Rice water – Do not put it milk, it may cause a depletion of vitamins</p> <p>17. Gourd, radish – Do not eat in the same day, it may lead to diabetes which weaken the sperm.</p> <p>18. Mangosteen and sugar – Do not eat together, it can cause death.</p> <p>19. Nuts and pumpkin – Do not eat together, it may may cause a body injury and Enterocolitis.</p> <p>20. Alcohol and persimmon – Do not eat together, it may cause toxins into your body.</p> <p>21. Rice Whisky and beer – Do not eat together, it may cause a cerebral haemorrhage.</p> <p>22. Durian and soft drink – it cause toxins in your body and lead to death.</p>				
26	<p>Fake Rice from china made from sweet potato. Potato with plastic is spread into India, Indonesia and Vietnam. Urgent investigation is currently in the news, warning that ‘resin’ can cause death. The StraitTimes Website in Singapore reported that plastic rice in China made from sweet potato, potato and artificial resin is spread into local areas of Indonesia, Vietnam and India. Health specialists warned that eating fake rice can cause death or destroy the digestive system. News about fake rice in China, especially in Tai-Yaun city, Sarn-Se province</p>	<p>Fake Rice from china making from sweet potato, potato with plastic is spread into India, Indonesia and Vietnam.</p> <p>It is made from sweet potato, potato and artificial resin, causing death.</p>	<p>Fake rice making from sweet potato, potato and artificial resin causing death.</p>	<p>Hazardous claims</p>	<p>Caution</p>

	is also spread in social media, WhatsApp and Facebook. Minister of agriculture in Malaysia, Ismail Sabri, said that there is no report about fake rice. However, the Ministry will announce how to notice the fake rice. Minister of domestic trade, Hasan Malic, said that the fake rice news is reported but it is still under investigation especially in the local shop and rural area.	This also reported by The StraitTimes Website in Singapore. Minister of agriculture in Malaysia, Ismail Sabri, said that there is no report about fake rice.			
27	Fake rice is not just only in online social news. Rather, it is now in Nan (Thai province). There is rice sold in a truck in a village. People buy it because it is cheap. Later, once the rice is cooked, it is found to be fake.	Fake rice in Thailand	Fake rice	Hazardous claims	Caution
28	Ministry of health in Malaysia and Singapore stopped importing apples from United States 10 days ago. Do not eat apples at this time including Granny Smith, Enza, Gala dinner etc. There are a lot of people who died because of bacterial infections in apples. Listeria is the name of bacteria that cause serious sickness.	Do not eat apples at this time including Granny Smith, Enza, Gala dinner etc. A lot of people died because of bacteria infected in apples. Ministry of health in Malaysia and Singapore stopped importing it.	Stop eating apples from USA because it is infected bacteria. A lot of people died. Ministry of health in Malaysia and Singapore banned it.	Hazardous Claims Institutional Claims	Caution The making of reliability
29	Warning, there is truck selling fake rice. Some people buy and eat it. They suspect that this rice may be fake so they try grilling the rice in the pan. Later, the rice melted just like plastic. Anyone who bought the rice should test it.	Fake rice. It smells like a plastic	Fake rice. It smells like a plastic	Hazardous Claims	Caution
30	Shocking! 420 Kidney stones are founded in a Chinese guy BBC News reported that the Chinese guy had surgery to remove 420 kidney stones, assuming that because of consuming a high amount of tofu. Mr. Hay Shai from Jerjiaing province, East China, received surgery for over 2 hours to remove kidney stones. Doctors said that the reasons for having so many kidney stones may be because of eating too much tofu and not drinking enough water.	BBC News reported that the Chinese guy received a surgery to remove 420 kidney stones, assuming that because of consuming the high amount of tofu. Any products from soy beans especially tofu which contains gypsums provide too high calcium level.	Consuming the high amount of tofu can cause kidney stones, reported by BBC News.	Sickness Claims Institutional Claims	Caution The making of reliability

	<p>Any products from soy beans especially tofu which contains gypsums provide a high level of calcium. The digestive system cannot remove them all unless you drink enough water.</p> <p>Mr. Hay has come to see doctor since last May after he had stomachache. After doing a computer scan, a lot of kidney stones were found. The doctor said that if he came too late, his kidney may need to be removed.</p>				
31	Do not use tap water to cook rice because it contains chlorine for killing germs, virus or bacteria. If using tap water to cook rice, chlorine will destroy vitamin B and nutrition in rice. Cooking rice with tap water will remove most of the nutritional value.	Do not use tap water to cook rice because it contains chlorine for killing germs, virus or bacteria. If using the tap water to cook rice, chlorine will destroy vitamin B and nutrition in rice.	Do not use tap water to cook rice. It will remove most of nutrition.	Science explanation	The use of science statement
32	Warning. Do not eat durian with soft drinks. Some people died presumably due to the combination of gas.	Do not eat durian with soft drink. Some people died guessing that because of the combination of gas and gas.	Eating Durian and soft drink is hazardous because it is a combination between gas and gas.	Hazardous Claims	Caution
33	Fake eggs are coming into Bang-Kla market (market in Thailand). Fake eggs are big but cheap. We can tell if the egg is fake if the egg shell is not smooth. Once we crack it, the yolk colour is faded. If we fry the egg, the egg will become like flour. Please share this for our health. A lot of people buy the eggs and the doctor said that the fake egg effects the nervous system and other parts of the body.	<p>Fake eggs found in Thailand.</p> <p>The shell is not smooth. The yolk colour is faded.</p> <p>The fake egg effects on nervous system and other parts of the body.</p>	<p>Fake eggs found in Thailand.</p> <p>Eating fake eggs will effect on nervous system and other parts of the body.</p>	<p>Hazardous Claims</p> <p>Science explanation</p>	<p>Caution</p> <p>The use of science statement.</p>
34	Steam mangosteen can treat lung cancer, Pulmonary Emphysema and can remove phlegm in those who have allergies. The substance call 'Xanthone' from mangosteen skin can kill cancer. Once mangosteen is boiled or steamed, it is equivalent to BIM 100. Mr. Suwat Sapyaprapa, food chemist, is the researcher for this formula. He said it can be used to treat lung cancer patients, Pulmonary	Steam mangosteen can treat lung cancer, Pulmonary Emphysema, removing phlegm in those who have allergy. Mr. Suwat Sapyaprapa, food chemist, is the researcher for this	Steam mangosteen can treat lung cancer, Pulmonary Emphysema, removing phlegm.	<p>Treatment Claims</p> <p>Science Explanation</p>	<p>Hope</p> <p>The use of science statement</p>

<p>Emphysema patients and removing phlegm in those who have allergy.</p> <p>Instructions Steam or boil mangosteen for 20 minutes (but steam is better). Xanthone substance from the skin will be absorbed inside the mangosteen and become the medicine. Keep it in the fridge and eat 1 mangosteen per day to protect against all the diseases above. Do not eat more than 1 mangosteen. Once you are recovered, stop eating the mangosteen.</p> <p>BIM 100 is Balancing Immunity. It means adjusting your body's immune system to be normal. Once people have BIM 100 means your health is good. Anyone who wants to have BIM 100 can be normal people and patients such as cancer, allergy, Hemorrhoid, diabetics, Rumatoid, SLS, Talassemia, etc.</p> <p>Chulalongkorn University reveals that Xanthone from mangosteen helps to kill cancer and AIDs. Chulalongkorn University announce their research about Xanthone from mangosteen skin has anti-oxidants. It helps cure burns and kills cancer, tuberculosis, HIV virus and acne. The Xanthone will be developed into gauzes to help the first patients suffering from burns at Nopparat hospital.</p> <p>On 16 June 2014, Prof.Dr. Pitch Suppol, Department of The Petroleum and Petrochemical College, Chulalongkorn University announced the news about "products from inflamed skin extracting Xanthone from mangosteen skin, Innovation from Chulalongkorn's researcher". He explains that Xanthone is an anti-oxidant, anti-inflammatory, kills cancer cells and kills disease on tuberculosis, acne and virus on HIV, H5N1 etc. Once inside mangosteen's skin pass the chemical process. There will be a large amount of Xanthone in the form of powder. It can be kept for 2-3 years.</p> <p>Moreover, they still develop Xanthone to be more effective on killing diseases by stretching Xanthone's molecules into medical equipment such as mask, gauze, plaster, alcohol and acne patch etc. Chulanlongkorn University produces some products from it and it</p>	<p>formula. He said it can bring to treat lung cancer patient, Pulmonary Emphysema patients and removing phlegm in those who have allergy.</p> <p>The instruction of making steam mangosteen.</p> <p>The explanation of BIM 100.</p> <p>The explanation of Xantone from mangosteen.</p>		<p>Institutional Claims</p> <p>Academic Claims</p>	<p>The making of reliability</p>
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	<p>has already guaranteed by the Food and Drug administration that it is usable and can be sold. It has been first used in Nopparat Ratchathani hospital.</p> <p>“The patient came with inflamed skin from burns and needed to be admitted in the hospital for 3 months. After using the Xanthone gauze for 12 days, he can go back home. This is really effective to protect and kill viral infections from other diseases. Products from mangosteen’s skin are a low-cost and are non-allergy because it has been tested in rabbit skin. All processes are carried by Thai people.</p> <p>Thank for the information from : Cheva Arokaya</p>				
35	<p>Pterygium</p> <p>How to treat Pterygium. Doing only once for removing it within 3 days. Slice 1 piece of lime into thumb-sized pieces. Always close your eyes and squeeze the lime on to the corner of your eye. Close your eyes for 15 minutes or longer. The longer you can close, the better result will be. You can leave it overnight. The eyes will be much clearer. Do it every 3 days and Pterygium will be gone within 1 month and it will never come back. Any people who have blurry, dry or itchy eyes can also do it, but should do it once every 2 weeks. Your eye will be better within a week.</p>	<p>The formula making from sliced limed to treat Pterygium.</p>	<p>The formula making from sliced limed to treat Pterygium.</p>	<p>Treatment Claims</p>	<p>Hope</p>
36	<p>Thai people are shocked!! Researcher from Food security institution from United Kingdom said that eating rice may cause cancer but there is a solution. Prior research found that brown rice has more arsenic more than normal rice.</p> <p>Agencies/ ASTV Manager online, Andy Meharg, British Professor in agricultural science and soil from the institute for Global Food Security, University Queen of Belfast, announced that even though rice is the main food for over a half of the people in the world, it contains arsenic and therefore has a high level of toxicity. Arsenic is the cause of lung cancer and bladder cancer because of rice sprouts which need to be planted in the basin of the river. The research from Prof. Meharg is the first time it has been discovered that the solution</p>	<p>Thai people are shocked!! Researcher from Food security institution from United Kingdom said that eating rice may cause cancer.</p> <p>Andy Meharg, British Professor in agricultural science and soil from the institute for Global Food Security, University Queen of Belfast announce that even rice is the main food for over</p>	<p>Thai people are shocked because the research found that eating rice may cause cancer.</p> <p>This is because over a half of the food contains arsenic acid.</p> <p>The description about the</p>	<p>The use of exclamation signs</p> <p>Institutional Claims</p> <p>Academic Claims</p> <p>The science explanation</p>	<p>Emotional plays</p> <p>The making of reliability</p> <p>The use of science statement</p>

<p>is to cook rice in a coffee making machine, destroying over 85% of the arsenic. In 2008, he also discovered that the amount of arsenic contained in brown rice is more than in normal rice.</p> <p>The Telegraph newspaper reported that Prof Andy Meharg announced the first successful removal of arsenic contained in rice.</p> <p>Telegraph also explains that rice is the only plant that needs to be in the basin of the river. This condition leads to the release of natural arsenic into the soil. Later, it is absorbed into the rice sprouts. The high level of arsenic in rice will lead to health problems.</p> <p>Prof. Meharg expressed that this research is the first step of discovering the most effective and accessible prevention of cancer caused by arsenic in rice. The research team discovered the method of cooking rice to get rid of arsenic, by using the technology of distilling coffee on coffee making machine. The coffee making machine helps boiled water flowing gradually into the rice. The research team conclude that the distilling technology was the most effective in decreasing arsenic in rice.</p> <p>The British Professor also said that people who eat rice and a main dish and receive arsenic over a long time are at risk to have high blood pressure, diabetes and destroyed nervous system. The most negative effect is lung cancer and bladder cancer.</p> <p>European Food Safety Authority (EFSA) announced that rice contains 10 times the amount of arsenic compared to other foods. The Telegraph concluded that this issue is important for people who eat rice as a main dish especially in the developing countries.</p> <p>The Research Institute from University of Belfast is currently registering intellectual property for the coffee distillation technology. They hopefully plan that people can buy this technology for their household.</p> <p>However, high levels of arsenic in rice causing cancer is not a new issue. From the article go Dr. Nuchnat Rangkadilok and Assoc. Prof</p>	<p>a half of people in the world contains arsenic having the high level of toxic.</p> <p>The research team discover the methods of rice cooking to get rid of arsenic acid by using the technology of distilling coffee on coffee boiling machine. The boiling coffee machine helps boiled water flowing gradually into the rice. The research team conclude that the distill technology can decrease the most amount of arsenic in rice.</p> <p>European Food safety Authority (EFSA) announced that rice is contained 10 times of arsenic compared to other foods. Telegraphs conclude that this issue is important for people who eat rice as a main dish especially in the developing countries.</p>	<p>researcher from United Kingdom. They are working on the methods to cook rice to reduce arsenic acid.</p> <p>European Food safety Authority (EFSA) announced that rice is contained 10 times of arsenic compared to other foods.</p> <p>More research explains about arsenic.</p>		
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<p>Juthamas Sattayawiwat from Chulaporn Research Institute and Graduate Chulaporn Institute about “the amount of arsenic in rice” was published 3 years ago on the website of Centre Excellence on Environmental Health and Toxicology confirmed the relationship between arsenic and the cause of cancer from eating rice.</p> <p>The research report from A.H. Smith and the team in 1992 under the research topic “Cancer risks from arsenic in drinking water” indicates that the arsenic is the toxic type of arsenic compared to other arsenic. Also, it really does cause cancer. Smith’s research found that the cancer risks also include liver cancer, lung cancer, kidney cancer, and bladder cancer.</p> <p>Moreover, the article from the two Thai academics states about the research from Chen et al on “Arsenic in drinking water and risk of urinary tract cancer” in Taiwan. This is further research that receiving arsenic, even in the low amount but over a long time increases the risks of bladder cancer.</p> <p>In the article from two Thai academics, they also talked about Dr.Meharg and the team in 2008 under the topic “Speciation and localisation of arsenic in white and brown grains” a study of the level of arsenic in rice in 39 examples and brown rice in 45 examples collecting from supermarkets and fields, found that brown rice has the higher level of arsenic more than normal rice.</p> <p>Later in 2009, the study from Dr.Meharg in sampling arsenic from 4 types of rice in 10 countries, 4 regions including Thailand, found that rice from Egypt and India have the lowest level of arsenic at 0.04 and 0.0 mg/kg respectively. However, United States and France are having the highest level of arsenic at 0.25 and 0.28 mg/kg. Rice from Thailand, from 54 examples, has an arsenic level at 0.14 mg/kg (0.01-0.39 mg/kg).</p> <p>The article from Dr.Nuchnart and Assoc.Prof. Juthamas also explains that rice is the main dish in China, the same as Thailand. Chinese people also received arsenic in the average of 42 µg. Rice is the main</p>				
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	reason for accumulating arsenic for 60% for Chinese people having cancer, referring from the research of Li in 2001.				
37	Don't drink soda with milk! Because the acid in the soda will react with calcium in milk turning them into Calcium Carbonate which will be left in your stomach causing stomachache and will be harmful to your health.	Don't drink soda with milk! The acid in the soda will react with calcium in milk turning them into Calcium Carbonate causing stomachache and harmful to your health.	Do not drink soda with milk because it will turn into Calcium Carbonate causing stomach ache.	Sickness Claims	Caution
38	Lemongrass - Pandanus leaf tea can cure Gout. It is unbelievable!! This is the message from the local doctor who gave me the secret. Lemongrass - Pandanus leaf tea for cure Gout. Actually there is a medicine to remove the toxicity from Gout for patients, that contains herbs but I think this formula will be beneficial and easy to make at home. I recommend finding fresh ingredients in for it to be much more effective. Composition 1. 4-5 Sprout of lemongrass 2. 2-3 leaves of Pandanus 3. 2 litres of water Boil lemongrass and Pandanus. Reduce the heat and continue boiling for 15 minutes. Do not open the lid. Leave it until it cools. Drink it instead of water for a week. It will wash out uric acid in the blood which is the cause of Gout. You will no longer need any medicine. This formula is guaranteed by patients that it is really effective! The side effect is that you have to urinate more often. Please avoid drinking less than 2 hours before bed.	Unbelievable! Lemongrass - Pandanus leaf tea can cure Gout. The composition of Sprout of lemongrass, leaves of Pandanus and water to make a drink. Drink it instead of water. You will no longer need any medicines. This formula is guaranteed by patients that it is really effective!	Unbelievable! Making a drink from Pandanus leaf and lemon grass can cure Gout.	The use of exclamation signs Magic recipe/formula Treatment Claims	Emotion plays Hope
39	Warning Fake Rice! Undercooked rice smells like plastic, found in Udonthani (Thai province). (Thairath Online 13 Sep. 2015, 1.19 pm) Police in Udonthani warn people about buying fake rice from a local seller driving a rice truck into villages. The price is a half than that in the market. It smells like plastic and is not edible. Anyone who found this rice should report it to the police.	Warning Fake Rice! Undercooked smells as plastic, found in Udonthani (Thai province). Currently a lot of people in Udonthani were cheated in	Fake rice found in Thailand	Hazardous Claims	Caution

	<p>On 13 September 2015, Police General Aree Sinthura said that under economic downturn situation, people need to buy cheaper consumer products while ignoring the quality. Currently a lot of people in Udonthani were cheated by buying fake rice from local truck coming to sell in the village.</p> <p>The merchant sells the rice at a half the market price and limits the buying to 5 sacks per person. That makes people believe it is genuine and buy it. The rice is later found to smell like plastic and is inedible. Please do not trust the seller.</p> <p>“If anyone found the suspected seller who drives a truck into the village and sells cheap rice, please report to the head of the village and the police. The Police will observe any suspected seller and arrest them if found”</p>	<p>buying fake rice from local truck coming to sell in the village.</p> <p>The rice is later found that smells as plastic and inedible. Please do not trust the cheated seller.</p>			
40	<p>Gout is one of the diseases that patients suffer from. There is no treatment that can completely help it. Only some methods can relieve the ache. Some people are in a severe condition such as being unable to walk. It is hazardous and can lead to diabetes, especially when eating chicken or other foods accidentally. It will definitely be painful.</p> <p>Ripe Star Fruit is one of the popular ways of the past to help it.</p> <ul style="list-style-type: none"> - 1 Star Fruit - Salt - 1 teaspoon of pure honey - 2 glass of boiled water <p>Blend all ingredients and drink it in the morning and evening for 6 days. The symptoms will be better as confirmed by the owner of this method. Any Gout patient can try it. It is certainly not hazardous because all ingredients come from natural ingredients.</p>	<p>Ripe Star Fruit can cure Gout.</p> <p>Blending Ripe Start Fruit with salt, honey and boiled water together.</p> <p>Drink it for 6 days.</p> <p>No hazardous because they are all natural ingredients.</p>	<p>The making of Ripe Start fruit and other ingredients to cure Gout</p>	<p>Magic Recipe</p> <p>Treatment Claims</p>	<p>Hope</p>
41	<p>For those Gout patients. To cook Job’s tears to cure Gout you should follow this:-</p>	<p>Cook Job’s tears with rice with a portion of 2 units of Job’s tears per 1 unit of rice. Eating it every day will help</p>	<p>The making of Job’s tears to cure Gout</p>	<p>Magic Recipe</p> <p>Treatment Claims</p>	<p>Hope</p>

	Cook Job's tears with rice with a portion of 2 units of Job's tears per 1 unit of rice. Eating it every day will help treating Gout. Do not eat chicken.	treating Gout and do not eat chicken.			
42	My friend's sister works in a seafood factory. She warns that we should not eat Dory fish because chemicals are added before freezing. The fish will be soaked in detergent powder (Phosphate) to remove dirt and then frozen. Thus, it means that we eat fish full of detergent powder. This is a previously unrevealed secret. By chokchai9x9x http://www.youtube.com/watch?v=wf4WrFzeuZ4&sns=em	My friend's sister warns us not to eat Dory fish because it uses detergent powder to remove dirt and freeze. This is an unreal secret.	Dory fish contaminated with detergent powder. It is a secret reveal.	Hazardous Claims The sound of hidden agenda	Caution Emotion plays
43	When we drink cold water, we feel so fresh. However, there are a lot of negatives of drinking it. - Drinking cold water reduces the ability of the brain to function; - A woman who drinks cold water during the period will feel more stomach-ache; - Drinking cold water after playing sport will lead to a loss of energy because it freezes the gastric processes; - Drinking cold water will clot the fats which slows the digestion process. The New Scientist Journal has published the research paper from University of Bristol, United Kingdom. The research found that a person who drinks cold water when they are not thirsty, it will suddenly reduce the brain function. One glass of cold water is enough to reduce mind efficiency by 15%. Dr. Peter Roger, University of Bristol and his team studied the effect of water in 60 participants, dividing into two groups; one not drinking any water and one drinking 10 C cool water at 300 ml. The result shows that the thirsty group drinking water do the test better compared to the non-drinking group. The group which is not thirsty and drink cool water shows 15% less efficiency when doing the test. The research concludes that drinking cold water effects the efficiency of driving or heavy use of the brain.	There are a lot of negatives on drinking it. The research found that a person who drinks cold water when they are not thirsty, it will reduce the ability of brains work suddenly. One glass of cold water is enough for reduce mind efficiency at 15% The research concludes that drinking too cool water effects on the efficiency of driving or any use of heavy brain. The research done by Dr.Peter Roger, University of Bristol.	Drinking cold water will reduce mind efficiency and other sickness. This confirms by the research from University of Bristol.	Hazardous Claims Sickness Claims Institutional Claims	Caution The making of reliability
44	Sukothai (Thai province), people bought bean flour sheets for Chinese Spirit Festival and found that it is fake.	People buy bean flour sheet for Chinese Spirit Festival and found that it is fake.	Fake bean flour sheet found. It smells like a	Hazardous Claims	Caution

	<p>On 29 August at Sukothai, people bought bean flour sheet for cooking for the Chinese festival. After soaking over 3 hours, the sheet was not soft. They then boiled it and it smelt like rubber. After tasting, it does not taste as same as they have eaten before. They try stretching it and it feels sticky. They use a magnify glass and see that the texture looks like rubber. They then test by burning it. Once it is burnt and it smells even more like rubber. The buyer decides to post the photo of the bean flour sheets to warn people about it. Once journalists found the post, they ask for examples to investigate. The journalists also boil it and find that it is still sticky and stretchy. After chewing, it does not taste like bean or tofu, but does smell like rubber. Anyone who used to cook with bean flour sheets before said that the real one should become soft after soaking.</p>	<p>After soaking over 3 hours, the sheet is not soft. They change to boil it and it smells like a rubber. They try stretching and it is sticky. After chewing, it does not taste like bean or tofu while smelling like a rubber.</p>	<p>rubber. When stretching, it is sticky.</p> <p>It does not taste like a tofu.</p>		
45	<p>The mother of a 19 year old girl has eaten a lot of food left overnight. She later has bladder cancer. Her weight went down from 60 Kgs to 20 Kgs within a year. Later she died. The daughter wrote this article to warn us.</p> <p>Every time you reheat the food, it increases the level of Nitrite. Nitrite will become toxic to liver and kidneys and cause cancer. I hope that every family will cook the appropriate portion to eat. That will mean that there is no cause to leave any food overnight. Having food left overnight is generally normal for any family but it has a lot of unexpected negative effects. The doctor diagnosed that my mother had gastric cancer and the lower part of the stomach needs to be removed and she needs to have 8 courses of chemotherapy. Her thoughts were that it is controllable, but later her mother died.</p> <p>We still need to explore the confirmation of the relationship between gastric cancer and eating food left overnight. However, the food left overnight is still toxic in terms of any digestive sickness.</p>	<p>Every time you reheated the food, it increases the level of Nitrite. Nitrite will become toxic to liver and kidney and cause cancer.</p> <p>The mother has bladder cancer.</p> <p>The overnight food is still toxic in terms of any digestive sickness.</p>	<p>Reheated overnight food increase the level of nitrite.</p> <p>It is toxic in terms of any digestive sickness.</p>	<p>Hazardous Claims</p> <p>Sickness Claims</p>	Caution
46	<p>On 5 June 'Police arrests the gang who sells fake rice'</p> <p>There is a news report that the police team from Burirum province arrested the gang selling low quality rice for people. Over 25 people reported to the police that they have been cheated by this gang. The gang confessed that they have combined low quality rice and sticky rice and sold to the people in many areas such as Buriram and other</p>	<p>Police arrests the gang who sells fake rice.</p> <p>The gang confess that they have combine low quality rice and sticky rice and sell to the people in many areas such as</p>	<p>Fake Rice Found in Thailand but later found as a low quality rice</p>	<p>Hazardous Claims</p>	Caution

	provinces for many years. They also separated the good quality rice into another bottle and show it to customer. After customers believed that the rice is good quality, they bought a lot of it. So far, the police have brought all the gang to the police station and are waiting for anybody to give any further indictments.	Buriram and other provinces for many years.			
47	<p>Fascinating Papaya leaves, a common plant with a special property, It can cure Dengue. Please share this to others!!!!</p> <p>Dr.Somyot Kittimunkong, The chief of staff taking care of HIV, Ministry of Public Health has undergone an interview about an interesting new method of treating dengue fever. Most people still don't know this, but a recent study which accidentally found that papaya leaves can be squashed to obtain their juice and can be a concomitant used with modern medicines. This method will definitely increase the platelets in 24-48 hours and lower the risk of death. It is curious that how Thailand never openly speaks about this since papaya leaves are very common in Thailand and also dengue is widely a fatal disease in the country.</p> <p>Dr.Somyot said that Dengue patient's platelets will decrease continuously from bleeding and leading to further risk of death, but drinking 30 ml of papaya leaf juice for 3 days consecutively makes the platelets increase slowly. When we asked him if he has revealed this to the head of the Ministry yet, He said not yet. He published this story only on www.ล้างพิษตับ.com and his own Facebook page, the article also included his name and telephone number. He is ready to answer and give the information about this because there is research widely spread and he is now starting to make contact with some hospitals.</p> <p>A procedure for using fresh papaya leaves to treat dengue fever:</p> <ul style="list-style-type: none"> - Using 50 grams of papaya leaves freshly removed from the tree, wash them and then mash them. - No need for additional water just removes the residues by filtering it. - Drink 30ml of the juice or half of a glass per day for 3 days consecutively. - 	<p>Papaya leaves can cure Dengue. Please share this to others!!!!</p> <p>The chief of staff taking care HIV, Ministry of Public Health interview about interesting new method of treating dengue fever.</p> <p>It is curious that how Thailand never openly speaks about this since papaya leaves are very common in Thailand and also dengue is widely fatal disease in the country.</p> <p>Washing and mashing papaya leaves, then filtering it and drink it for 3 days consecutively. Without major disadvantage or danger, it could be considered as a choice of therapy because treating dengue patient is only symptomatic treatment.</p> <p>More details about benefits of papaya leaves e.g. anti-cancer, anti-Malaria, lower the amount of fat etc.</p>	<p>Papaya leaves can cure Dengue. Please share this to others!!!!</p> <p>It seems to be a secret as it claims that no one in Thailand has spoken about it before, said by The chief of staff taking care HIV, Ministry of Public Health.</p> <p>It can be a choice of therapy.</p> <p>There are more of benefits to other sickness.</p>	<p>Magic Recipe/ Formula</p> <p>Institutional Claims</p>	<p>Hope</p> <p>The making of reliability</p>

<p>Research had been conducted that concludes that this method has no danger. Also, the active substances which increase platelets are not known yet, but the clinical outcome is already known in humans. Without any major disadvantages or any danger, it could be considered as a choice of therapy because treating dengue patients is currently only a symptomatic treatment. Now he is already in talks with some hospitals to try this treatment and is also informing the disease control officer to check it. "To speak openly about this whole story is not in order to persuade patients to treat themselves with papaya leaves juice at home and not to go to the hospital, but the patients need to go to the hospital since this treatment requires a concomitant treatment with modern medicine. The results from the blood tests found that platelets are increasing when comparing the research between the controlled group and uncontrolled group of drinking papaya leaves juice.</p> <p>Papaya leaves cure disease We already realise the benefits from consuming papaya, but recently the extract from papaya leaves is very popular since the discovery that its properties include curing fatal diseases such as Dengue fever and Cancer. By the increasing number of dengue fever patients the demand of papaya juice treatment is also increased. With the cheap and easy method, it is the best, not only because of the proof of its effectiveness against dengue fever but also curing other diseases. Furthermore it contains anti-cancer properties along with other health benefits.</p> <p>How to make papaya leaves juice Due to its bitterness we can mix it with other juices to lower it and here is how to make papaya leaves juice at home:</p> <ul style="list-style-type: none"> - Wash the leaves and leave it dry. - Cut them into a small pieces and then boil those with 2 liters of water in open system until the water volume reduce by half of the pot. - Remove the residue by filtering it until you get a clear solution. - It can be stored in the fridge for 3-4 days. You should drink it immediately if the juice starts to change its appearance. 	<p>The way to make papaya leave juices.</p>			
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<p>The other method is squashing the leaves and removing the residue until you got the solution. Even it is highly beneficial but there is a contraindication in pregnant woman, which leading to abortion and also do not consume it with Thyroid-related drugs and coenzymeQ10.</p> <p>Health benefits from papaya leaves juice as prior mentioned, papaya leaves juice has been proved that it has effectiveness on curing dengue fever and other health benefits as follows:-</p> <ol style="list-style-type: none"> 1. Dengue fever is a fatal disease which caused by dengue viruses in mosquitoes. It can be a life-threatening disease. The symptoms include an increase in body temperature, headache, severe muscle ache, joint pain, Rashes and decreasing platelets. Until now there is no specific treatment for the disease. Aspirin and Ibuprofen have an adverse effect, so papaya leaves juice is a natural therapy with no adverse effect. The scientific research and several studies have shown that papaya leaves juice contain mopapen and papen enzyme which increasing platelets and also relieve the symptoms of the disease. A pharmaceutical company is preparing to manufacture papaya leaves extract contain in capsule and liquid which will have less onset time. The doctor recommend 20-25 ml of papaya leaf juice two times a day per week. 2. Papaya leaf contains anti-malarial property, Some countries even use it to prevent and cure malaria. 3. The anti-cancer property is majorly in the leaf extract. According to the research published in ethnopharmacology journal found that some enzymes in the juice have anti-cancer and tumor properties such as throat-cancer, breast-cancer, liver-cancer, and pancreas-cancer. With no effective toxic substances, Some countries use it in formulation of chemotherapy by controlling the T-cells and enhancing immune system. 4. Papaya leaves contain essential nutrients such as Vitamin A, B1, C and E Proteins, Carbohydrates, Calcium, Phosphate, Iron and Papen enzymes which accelerate protein digestion. 5. Papaya leaf juice contain more than 50 types of active substances including karpain, which have can inhibit microbial growth such as 				
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	<p>mould and parasites as well as cancer cells. Using it can also kill parasitic worms as T-tannins prevent it from infecting the intestines as the worms cannot attach, so it is effective in preventing Typhoid.</p> <p>6. Another interesting utilisation of papaya leaf juice is its ability to have the effect against flu-virus by stimulating the white blood cells and platelets. Papaya leaf contains more than 50 substances including Vitamin A, C and E which enhance the immune system.</p> <p>7. Boiled papaya leaves with sliced orange can lower fat.</p> <p>8. Papaya leaves juice have are effective in relieving menstrual pain, In this case ; 1 leaf, Tamarind and salt and mixing them together in water and then boiling it.</p> <p>9. Papaya leaf is rich in Vitamin A and C, compared to its fruit, supporting your skin health.</p> <p>10. Papaya leaves juice act the same as washing your skin, karpain has anti-microbial abilities and anti-toxic abilities defending your skin from acne, freckles and pellicles.</p> <p>11. Papaya leaf juice can cure eczema and ringworms. You can directly apply it to the infected area.</p> <p>12. Fresh papaya leaf cure wound and abscess.</p> <p>13. Its sap can soften the hardened skin and also to remove warts. Hair benefits from papaya leaf, due to the rich amount of Vitamins, Minerals and Enzymes. Papaya leaf extract is used in making shampoo and conditioner to enhance your hair, making them stronger and also for people who suffer from alopecia and dandruff.</p> <p>14. Papaya leaf juice is used in hair treatment such as shampoo and conditioner, mixing it with other ingredients such as coconut and honey, making hair much more shiny and soft.</p> <p>15. Papaya leaf extracts use majorly in anti-dandruff shampoo because karpain is effective at removing dirt and oily chemicals without causing any side effects.</p>				
48	<p>Do not eat 10 snacks !</p> <p>Whoever loves eating snacks, please be careful of some snacks that contain lead.</p> <p>Cautions! Danger from snacks. This information is from Ratchapreuk Poll, Faculty of health, Mahidol University, who collected examples of snacks from 40 schools in 17 areas in Bangkok. They found that lead</p>	<p>Do not eat 10 snacks because it contains lead!</p> <p>This information is form Ratchapreuk Poll, Faculty of health, Mahidol University, collecting examples of snacks from 40 schools in 17 areas in</p>	<p>Do not eat 10 snacks because it contains lead. This is information from Ratchapreuk Poll, Faculty of health, Mahidol University.</p>	<p>Hazardous Claims</p> <p>Sickness Claims</p> <p>Academic Claims</p> <p>Science Words</p>	<p>Caution</p> <p>The use of science statement</p>

	<p>is contained in snacks and also high level of sodium. If you eat too many snacks, it may cause a Brain Aneurysm.</p> <p>Top 10 flour snacks containing high sodium.</p> <ol style="list-style-type: none"> 1. Arigato Crispy Squid 2. Pu Thai Crispy snack 3. SB Chilli Rice Crispy (Sweet Paper Flavour) 4. Hanami Prawn Rice Crispy (Maxican Chilli Flavour) 5. Roller Coaster Crispy snack (Onion Flavour) 6. Joto Corn Crispy snack (Squid Flavour) 7. Calbi Prawn Rice Crispy (Tomyum Flavour) 8. Manorah Fish Rice Crispy 9. Manorah Prawn Rice Crispy 10. Tomato Brand Crispy snack (Tomato flavour) 	<p>Bangkok. They found that lead is contained in snacks and also high level of sodium. If eating too much snacks, it may cause Brain Aneurysm</p>	<p>It may cause Brain Aneurysm.</p>		<p>The making of reliability</p>
49	<p>The most dangerous thing about tap water is chlorine. The solution is to transfer water in to a water jar and remove the lid for 30 minutes in order to let water evaporate before using the water to cook rice. Please do not directly use tap water to cook rice. That is the incorrect way to do it because water containing chlorine combined with rice and added with heat, will become trihalomethanes, in other words, a active cancer substance. A lot of Thai people die because of cancer. Please forward this to others. A lot of countries have already changed to Fluoride.</p>	<p>The most dangerous point of tap water is chlorine.</p> <p>Please do not use tap water to cook rice straightforwardly. That is incorrect way to do because water contained with chlorine combine with rice and added with heat. It will become cancer substance active.</p>	<p>Do not use tap water to cook rice because it will be a combination of rice and heat to become cancer substance active</p>	<p>Hazardous Claims</p> <p>Science Words</p>	<p>Caution</p> <p>The use of science statement</p>
50	<p>A Science teacher with students from Chiang Kong school bought eggs from local seller that sell from a truck, in order to demonstrate in class. The teacher cracked the eggs and thought it looks like a fake egg. It has an oval shape and an off-white egg shell. When shaking the egg, it looks like a soft-boiled egg. The egg shell has green 'H; symbol'. Student said that the egg was sold in the truck at 24 eggs for 60 BHT (1-2 GBP). The student's father boiled it and ate it. He found that it taste like flour.</p> <p>After the teacher demonstrated the egg with some chemical interaction, the result is different from real eggs especially, egg white, yolk and shell. This is because real eggs can control its yolk's shape even moving into different container. Once the fake egg is cracked, its</p>	<p>The teacher found fake eggs. It has been demonstrated with some chemical interactions. The result is different from real eggs. Once the shell is burnt, the real egg shell smells normal while the fake smells chemicals.</p> <p>The teacher concludes that the eggs should have been made by some chemicals.</p>	<p>Fake eggs found by the teacher.</p> <p>The teacher have tested it by different chemicals. The results is different from the real eggs.</p>	<p>Hazardous Claims</p>	<p>Caution</p>

	<p>shape is lost. The real egg has tissue between the shell and the egg white, while the fake egg becomes like flour once it is soaked. Tissue in fake eggs look like real tissue. Once the shell is burnt, the real egg shell smells normal, while the fake smells of chemicals.</p> <p>The teacher said that those eggs were produced by some chemicals to look like a real egg, but overall it looks really unnatural. The latest is that the Provincial Health Office has come to collect examples to investigate in the lab, aiming to have the results within a week.</p>	Overall it looks really unnatural.			
51	<p>WHO reports that Thailand is now ranked the top Country of deaths from cancer because of</p> <ol style="list-style-type: none"> 1.Eating grilled meats; 2.Eating overnight coconut milk contained in food; 3.Eating Fried bananas and Chinese doughnuts; 4.Eating overnight fried vegetables; 5.Using foam box. 	WHO reports that Thai is now ranked the top of death from cancer because of 5 reasons ; eating grilled meats, overnight coconut milk fried bananas, Chinese donuts, overnight fried vegetables and using foam box	Thai is now ranked the top of death from cancer because of 5 reasons, reported by WHO.	<p>Hazardous Claims</p> <p>Sickness Claims</p> <p>Institutional Claims</p>	<p>Caution</p> <p>The making of reliability</p>
52	<p>Drink 1 unit of alcohol per 6 bottles of soda in the morning and evening or lunch. Acid from alcohol will kill cancer cells. The World Health Organisation keeps it as a secret because they want to sell medicine and chemotherapy. Please try it. It helps without you requiring any medicine or therapy. Eat more vegetables and eat less meat because meat is the food that causes cancer. A lot of people die from cancer. We know that alcohol can help. Please forward this as new knowledge.</p>	<p>Drink alcohol 1 unit per 6 bottles of soda in the morning and evening or lunch. Acid from alcohol will kill cancer cells. WHO keep it as a secret because they want to sell medicine and chemotherapy.</p>	<p>Drink alcohol to kill cancer cells. WHO keeps this information as a secret.</p>	<p>Treatment Claims</p> <p>The sound of hidden agenda</p>	<p>Hope</p> <p>Emotion play</p>
53	<p>What is Tomalley? Most people love tomalley which is actually Shrimp liver. The truth is Shrimp liver causes toxicity and disease much more than you can know.</p> <p>Freshwater fish health Research center, Fishery research and development institute have confirmed to people about its toxicity. Shrimp Liver, like human and liver from other animals, have a major role in filtering toxins and other pathogens from blood circulation and also produce specific enzymes for the digestive system . Therefore, liver is affected by toxic substances in the body; The body transmits its fat cells to check for any metal compound or toxins. Tomalley is found in the head of the shrimp. Tomalley is full of hazards and creates disease in your body. Cholesterol in your blood</p>	<p>The shrimp liver (Tomalley) is the cause of toxicity and disease much more than you know.</p> <p>Freshwater fish health Research center, Fishery research and development institute acknowledge the people about its toxicity.</p> <p>Shrimp Liver has a major role on filtering toxic and other</p>	<p>The shrimp liver (Tomalley) is the cause of toxicity, said by Freshwater fish health Research center, Fishery research and development institute.</p>	<p>Science Explanation</p> <p>Hazardous Claims</p> <p>Institutional Claims</p>	<p>The use of science statement</p> <p>Caution</p> <p>The making of reliability</p>

	circulation will increase more than usual and cause multiple diseases to grow, such as a heart disease or vascular disease. So, people who enjoy eating tomalley, should be careful.	pathogen from blood circulation .Therefore Liver is included by toxic substances in the body			
54	My beloved friends, I have had a chance to talk to a doctor from Siriraj Hospital. The doctor said that we should stop eating cockles (a type of shellfish) because it supports the growth of cancer. It is prohibited for women because it can cause tumour and which can grow bigger quickly. I share this with goodwill.	The doctor from Siriraj Hospital said that we should stop eating cockle (one type of shell) because it supports the growth of cancer disease. It is prohibited for woman because it can cause seed.	Stop eating cockle because it can grow cancer disease and see among women.	The making of closed relationship Institutional Claims Hazardous Claims Sickness Claims	The making of reliability Caution
55	<p>Toxins from drinking cold water cause backache and weaken kidneys. Whoever could imagine the huge negative effects from drinking cold water.</p> <p>The Doctor saw a patient with weakened arms and legs, also known as Paralysis. After searching further, it was found that the cause is drinking cold or iced water. The patient said that s/he did not eat vegetables since childhood, s/he ate only meat and regularly drank cold water only from the fridge.</p> <p>Before their muscle is weakened, their body had a sign of the disease such as headache, Seeing the twinkles while blinking, loss of speech until suddenly passing out and having to be carried to the hospital. When awakened, the patient cannot move the left side of the body and this is the symptoms of Cerebral thromboembolism in a patient who is only 40 years old and who always drinks cold water all the time. Thai people who are drinking cold water make their kidneys work harder to relieve the coldness from the body by driving the cold water to the Urinary Bladder before urinating. Cold water increases the blood viscosity and also the blood vessels themselves lose their elasticity, leading to fat and other wastes to collect in the vessels. And finally, this can cause vascular disease.</p>	<p>Toxic from drinking cold water cause backache, weaken kidney.</p> <p>Drinking cold water in Thai people making their kidney work hard to relieve the coldness from the body by driving the cold water to Urinary Bladder before urinated. Cold water increase the blood viscosity and also the blood vessels themselves lost their elasticity leading the fat and other wastes to adhere in the vessels. And finally causing a vascular disease.</p> <p>So if anyone still regularly drinks cold water, milk, coffee, soda, juice, tea will</p>	<p>Drinking cold water will cause a number of sickness e.g. backache, waken kidney, increasing the blood viscosity etc.</p> <p>This information is from Dr.Dumrong, the personal doctor of King Bhumiphol.</p>	Sickness Claims Royal Family Claims	Caution The making of reliability

	<p>Our kidneys are just like a magical water filter, working by filtering all the wastes from the blood circulation and eliminating them in the urine. Working 24 hours per day with no holidays, if we worsen the kidneys by eating non-healthy food which include cold water is going to make your kidneys weak and will have signs as follows:-</p> <ol style="list-style-type: none"> 1. More frequent urination, Have to go to the toilet more often after drinking and have to go to toilet multiple times at night. 2. Backache, or other aches when sitting for a long time. 3. Pain in joints and the rest of the body such as in the knees or neck 4. Thromboembolism <p>So if anyone still regularly drinks cold water, milk, coffee, soda, juice, tea will definitely have backache. This is the advice for taking care of yourself:-</p> <ol style="list-style-type: none"> 1. Lower your blood viscosity by drinking 8-10 glasses of warm water every day. 2. Enhancing your blood flow by exercising or repositioning your bones will increase your blood flow. 3. Don't eat meat, fries and sweets. They're causing a lot of free radicals (organic molecules responsible for aging, tissue damage) leading to Embolism. 4. Never drink cold water. Don't ignore this, do not drink it and do share it to others. <p>From Dr.Dumrong, the personal doctor of King Bhumiphol.</p>	<p>definitely have a backache, this is the advice for taking care yourself.</p> <p>From Dr.Dumrong, the personal doctor of King Bhumiphol.</p>			
56	<p>Please be cautious when eating Red Tilapia fish. The dishonest merchant injects formalin.</p> <p>Doctor said that Red Tilapia fish injected with formalin is very dangerous. An overdose formalin stops the kidneys working!!</p> <p>There was a report to The Office of Consumer Protection Board that there are some merchants injecting formalin to Red Tilapia fish in order to keep it fresh. The board started an investigation and banned the fish from the market to protect consumers from danger.</p>	<p>Please be cautious when eating Red Tilapia fish. The cheated merchant injects formalin.</p> <p>Overload formalin stop kidney working!!</p> <p>This is really shocked because formalin injection is</p>	<p>The Red Tilapia fish is injected by formalin. Some merchants use it to keep the fish fresh. The overload formalin can stop kidney working.</p>	<p>Hazardous Claims</p> <p>Sickness Claims</p> <p>Institutional Claims</p>	<p>Caution</p> <p>The making of reliability</p>

	<p>Further on 16.00 on 11 April, Doctor. Danai Therawanta, Deputy Director, General Department of Health expressed that the 'formalin' or 'chemical solution used in dead bodies' is known as keeping the dead body from decay. Some people use it in food especially seafood because fishing boats normally takes a period away. The cooling system in the boat is not enough to keep fish fresh. Thus they add formalin into it. Actually there is a chemical inspection in seafood.</p> <p>However, there is a report about formalin injections into to the Red Tilapia fish. This is really shocking, because formalin injection is more hazardous than soaking. Soaking makes formalin covers around the fish skin. Once people cook the fish, it decreases the level of contamination. Injecting the formalin is equivalent to injecting formalin to the dead body, increasing the freshness.</p> <p>If people consume a high level of formalin, it will effect the working of food digestion because formalin has high level of acid and base. The intestines and stomach will be highly affected because of removing the toxins out of the body.</p> <p>To relieve the symptoms caused by having formalin, you should drink lots of water. If you have serious heart palpitations, please go to see doctor. When buying fish, please notice the eyes and gum, these should not only be fresh, but it also has to have a clear red colour.</p>	<p>more hazardous than soaking.</p> <p>The Deputy Director, General Department of Health said that some merchants use it to keep the seafood look fresh.</p> <p>Once people cook, it decreases the level of contamination. If people consume the formalin at a high level, it will effect on the working of food digestion because of formalin has high level of acid and base.</p>	<p>It will effect on the working of food digestion if people cook and consume it.</p>		
57	<p>Please share for huge benefits. I've got some herb medicine formula to help kidney failure from a person from Northern Thailand who has had kidney disease for several years and has done kidney cleanses 3 times per week. A lot of money has been spent on treatment and other costs.</p> <p>8 months ago, someone recommended me to boil 7-8 of Bai Yor (a Thai herb leaf) and 8-10 slices of dried Bael fruit until the water becomes brown, like tea. That person drinks this water for 3 months. After he was back from hospital and he shows his arm that has been injected, his doctor said that he does not need to do kidney cleanse anymore. So he wants to tell others to drink it as it is cheap and easy to make.</p>	<p>Boiling 7-8 of Bai Yor (Thai herb leaf) and 8-10 sliced of dried Bael fruit until the water become brown like tea. The person drinks this water for 3 months. After that he does not need to do kidney dialysis.</p> <p>The writer try this formula for 2 months because the leg is numb and swollen and later</p>	<p>Bai Yor (Thai herb leaf) can help kidney disease.</p> <p>The doctor is surprised.</p>	<p>Magic recipe/formula</p> <p>Treatment Claims</p>	<p>Hope</p>

	<p>3 months ago, I woke up and found that my leg is numb and swollen. I went to hospital and the doctor diagnosed that I have chronic kidney disease. I have to control the nutrition by not eating spicy, sour and especially salty food. I have to eat 3 eggs a day but the doctor did not give me any medicine for my kidneys as he said there is no medicine to help it.</p> <p>After I met this guy and tried the formula for 2 months, I went to hospital again. I have to have a blood test every 4 weeks. But the doctor extended it to 4 months because my kidney now works as normal. Even the doctor is also surprised with the results and asked me what I've done. I tell you all this, if anyone believes it, you can follow me. If you can recover, it means we would have done merit together from a previous life until this life. It is better than randomly trying something else but ending up with kidney cleanses until the end of your life.</p> <p>I tried this formula and got a good result so I want to tell every patient in order to become recovered. I would like to give my gratitude and sincere thanks to the guy that told me about it. God please bless and protect him and all patients to recover from this disease. Long live everyone. Thank you for reading this.</p> <p>Reference: Thai local herb community</p>	found that the doctor surprised.			
58	<p>Thai people were lying that eating durian will lead to you becoming fat and getting diabetes. There is research in Thailand and other countries that durian is the king of fruit but the Thai government does not have the budget to promote durian like Western fruits.</p> <p>Benefits of durian</p> <ol style="list-style-type: none"> 1. It can sterilise from its sulphur. The sulphur is equivalent to light antibiotic medicine. 2. It helps burning fat because of the heat from sulphur. So it helps people to lose weight 3. It helps digestion from its fibre which wash your intestines 	<p>Thai people were lie that eating durian will be fat and got diabetics.</p> <p>Thai government does not have budget to promote durian like Western fruits.</p> <p>Benefits of durians; antibiotic medicine, burning fat because of the heat from sulphur, losing weight, helps</p>	<p>Durian has a lot of benefits, specifically losing weight.</p> <p>Thai government does not have budget to promote durian like Western fruits.</p>	<p>The sound of hidden agenda</p> <p>Treatment Claims</p>	<p>Emotional plays</p> <p>Hope</p>

	<p>4. It has high level of anti-oxidants and Vitamin E which helps protecting against Cervical cancer, Breast cancer, reducing fat and cholesterol and anti-ageing.</p> <p>How to eat durian Eat after waking up around 5.00-7.00 am Eat around 2-3 unit or a half of 1 durian Follow by drinking warm water and skip breakfast on that day.</p>	<p>digestion, high level of anti-oxidants</p> <p>The way we should eat durian.</p>			
59	<p>For those who love to eat rice noodles, please stop. The Centre of Consumer Thai Magazine, Consumer Thai Foundation found preservatives in rice noodles causing cancer or disability. Before eating any food, please consider something fresh and clean. Please follow news and information about food.</p>	<p>Stop eating rice noodles because it is found preservatives in rice noodles causing cancer or disability, reported by Consumer Thai Foundation</p>	<p>Stop eating rice noodles because it is found preservatives in rice noodles causing cancer or disability</p>	<p>Hazardous Claims</p> <p>Sickness Claims</p> <p>Institutional Claims</p>	<p>Caution</p> <p>The making of reliability</p>
60	<p>If sharing this, you will get huge benefits. 2 limes with 1 bottle of soda. Drink it in the morning and evening. Drinking it at lunch will be better. The acid from lime directly kills the cancer cells. The World Health Organisation keep it as a secret because they want to sell medicine and chemotherapy for cancer patients. Try doing this. It helps without taking any pills or therapy. For the nutrition, cancer patients should eat more vegetables because meat is the food for cancer. A lot of people die from cancer. I just know that lime and soda can cure cancer. Read and forward it as knowledge.</p>	<p>2 limes with 1 bottle of soda. Drink it in the morning and evening. If drinking on lunch will be better. The acid from lime directly kills the cancer cells. WHO keep it as a secret because they want to sell medicine and chemotherapy for cancer patients.</p>	<p>Drinking lime and soda can cure cancer.</p> <p>WHO keep it as a secret because they want to sell medicine and chemotherapy for cancer patients.</p>	<p>Magic Recipe/formula</p> <p>The sound of hidden agenda</p>	<p>Hope</p> <p>Emotional plays</p>
61	<p>When we buy bananas, if you see the top and bottom turns green, do not buy it because they have had accelerated growth chemicals used on them, causing cancer. My friends who sell bananas also do it. Do not buy and eat it.</p>	<p>Do not buy bananas if see the top and bottom turns green because they use accelerator growth chemicals.</p>	<p>Do not buy bananas if see the top and bottom turns green because they use accelerator growth chemicals.</p>	<p>Hazardous Claims</p> <p>The making of closed relationship</p>	<p>Caution</p> <p>The making of reliability</p>
62	<p>OMG!!!!!! The more costly food is, the more hazardous it can be. Revealing the fact of the merchant who makes Hed-Tob (One type of popular Thai mushroom) which has become hazardous!!</p> <p>Hed-Tob is very popular. Once it has been left in stock, the shells become hard while its insides turn black. The seller will bring into the</p>	<p>Revealing the fact of merchant who makes Hed-Tob (One type of popular Thai mushroom) becomes hazardous!!</p>	<p>The seller renews Hed-Tob (One type of popular Thai mushroom) by spraying formalin and leave it</p>	<p>The use of exclamation signs</p> <p>Hazardous Claims</p>	<p>Emotional plays</p> <p>Caution</p>

	<p>sand, spray formalin into it and leave it overnight. Later they will filter the sand out and put soil it in order that it will look fresher.</p> <p>Her-Poh or Hed-Tob is a mushroom in the type of Diplocyetaeae. Its sprout looks like other mushrooms in the type of Basidiomycota having an oval shape. Once it grows, the shape looks like a start because its outside tissue is cracked. Her-Poh is a mushroom growing up with other plants normally in sand soil.</p> <p>So, we know it. Before eating, please consider. Your life will be safe.</p>	<p>Once it has been left in stock, the shells become hard while its inside is getting black. The seller will bring into the sand, spray formalin into it and leave it overnight.</p>	<p>overnight. It is hazardous.</p>	<p>Science Words</p>	<p>The use of science statement</p>
63	<p>Caution to any customer! A customer found fake grass jelly and report to the media.</p> <p>On 8.00 am at 26 May. Mr. Vichai Chuloak, 46 years old, and his wife brought the bag of fake grass jelly and receipt from the store they bought it from, MAKRO's Nakhon Sritammarat branch. They reported to the media that they want the Consumer Protection Agency to investigate this product in the store to see whether it is fake or not.</p> <p>Mr. Vinai explained that he went shopping to the store 3 days ago. He bought a lot of things including this jelly. He froze it when he went home. He brought it out from the fridge 2 days later for his children. However, his children told him that they cannot eat it. He then saw the jelly and thought that it looks like a sponge. Once it grids, it becomes like noodlea. He tried eating it and it felt very sticky. He concludes that it taste different compared to the one he ate before.</p> <p>"So I brought the jelly with the receipt to the store and asked to speak to a member of staff. The manager comes to talk to me and inspected it. He insists that the jelly is real and they have no responsibility about it. He told me to contact the original company by myself. Otherwise, he suggested that I report it to the police. I feel it is really unfair. I don't want this to happen to anybody else so I decide to report to all media asking for an inspection"</p> <p>Mr. Vinai said that he bought the jelly for 45 BHT (1GBP) but he does not care about the money. He wants the store to take the</p>	<p>A customer found fake grass jelly and report to the media.</p> <p>He then saw the jelly and thought that it looks like a sponge. Once it grid it, it becomes like a noodle. He tried eating it and felt so sticky. He concludes that it taste different compare to the one he ate before.</p>	<p>A customer found fake grass jelly and report to the media.</p> <p>It is very sticky when eating and taste different compare to the one he ate before</p>	<p>Hazardous Claims</p>	<p>Caution</p>

	<p>responsibility for this issue and to be honest to the customer. Even if they give him his money back, it will not make him feel any happier. The store should have qualified standard, responsibility and not just selling this stuff. One life is worth more than 45 BHT.</p> <p>However, the inspection so far reports that the jelly is a green plastic pack and manufactured by Nitaya Coconut jelly (address of the manufacturer) sold by HorJorKor Sam Sa Marn “Fluffy, Quality Grade Jelly 1 Kg. at 45 BHT” Inside the bag contains black jelly. The spoon cannot cut the jelly so a knife needs to be used. After cutting, it was found that at the centre of the jelly is the real jelly at 1% while covering with sponge.</p>				
64	<p>I’ve tried searching it but no one speaks about it so I will speak about it. I would like to talk about some Thai good item. I’ve got knee ache and taken a lot of Glucosamine medicine, but it only temporarily helps. But yeah a mangosteen can help. When you chew it, do not throw out the seeds. The seeds taste plain but keep chewing them. I have eaten 1 kg every day until 7 days. I have no longer feel pain in my knees. It is recommended for a monk who walks a lot. Everyone can recover from it. It is also delicious and helps with pain. I wish everyone who has knee ache is able to recover from it. This message is from one of my friends whom I respect.</p>	<p>I’ve tried searching it but no one speak about it.</p> <p>A mongosteen seed can cure knee ache. I tried chewing its seeds every day for 7 days. I have no longer feel pain at my knees.</p>	<p>Chewing mangosteen seeds helps knee ache. No one talks about it before</p>	<p>The sound of hidden agenda</p> <p>Treatment Claims</p>	<p>Emotional plays</p> <p>Hope</p>
65	<p>On June 10th Dr.Panuwat Panket, Spokesperson of the department of health services, Ministry of Public Health, spoke about his concern over Leptospirosis in people during the Rainy season. Nowadays Leptospirosis can be found both in the country and city. During rainy season there is a high risk of becoming infected due to rice-field rats, mice and wild rats which all are the potential carrier of Leptospirosis, They emigrate from the flooded area to residential area including buildings. The germs in their urine can have a life span of several months and spread to people. These germs can penetrate into the human body through 2 ways; the first one is through the mouth by eating or drinking contaminated food and drinks and secondly via a wound or damaged tissue and skin. Normal skin can also be penetrated by the contact with contaminated water over a long time, without any pain or itching symptoms. Dr.Panuwat said that the people who like to drink straight from the can also have a high risk of Leptospirosis because the arrangement of the drinks</p>	<p>Leptospirosis caused by Ricefield rat, Mouse and wild rat. The germs in their urine can have several months’ life span and spread all over to people. These germs can penetrate into human body through 2 ways; The first one is mouth by eating or drinking contaminated food and drinks and also by wound or damaged tissue and skin.</p> <p>The people who like to drink straightly from the can also concerned for Leptospirosis</p>	<p>People who like to drink canned water has to concern about Leptospirosis because it could be contaminated by rat’s urine during the rainy season where the rat migrates from the flood.</p>	<p>Hazardous Claims</p>	<p>Caution</p>

	normally are vertical, i.e the opening side is actually on the upside which could be contaminated by rat's urine. So it is important to wash the can before opening it.	in high risk because the arrangement of drinks normally are vertical the opening side is actually on the upside which could be contaminated by rat's urine.			
66	<p>Even more hazardous, the toxins from milk tea can cause paralysis!!!! Sometimes it is the food that we eat, something that you never thought that would harm your health. Today we reveal the other hazard hiding in the well-loved drink like milk tea.</p> <p>A Doctor saw the patient with weakened arms and legs, also known as Paralysis. After searching further, it was found that the cause is drinking cold or iced water. The patient said that he did not eat vegetables since childhood; s/he ate only meat, and regularly drank cold water, only from the fridge.</p> <p>Before their muscle is weakened, their body did have signs of the disease such as headache, seeing the twinkles while blinking, loss of speech until suddenly passing out and have to be carried to the hospital. When awakened the patient cannot move the left side of their body anymore and this is the symptoms of Cerebral thromboembolism in a patient who is only 40 years old and who always drink cold water all the time.</p> <p>There are signals that tell you that your body has a problem as follows:-</p> <ol style="list-style-type: none"> 1. More frequent urination. Have to go to the toilet more often after drinking and have to go to the toilet multiple times at night 2. Backache, aches around the waist when sitting for a long time. 3. Pain in joints and other parts of the body such as the knees or neck 4. Thromboembolism <p>So if anyone who still regularly drinks cold water, milk, coffee, soda, juice, tea will definitely have a backache, this is the advice for taking care of yourself:-</p>	<p>The toxic from milk tea can cause paralysis!!!!</p> <p>The reveal of hazard hiding in milk tea.</p> <p>The Doctor see the patient with weaken arms and legs also known as Paralysis. The further searching found that the cause is drinking cold or iced water.</p> <p>If anyone still regularly drinks cold water, milk, coffee, soda, juice, tea will definitely have a backache.</p>	<p>Drinking milk tea and other cold water can cause paralysis.</p>	<p>Hazardous Claims</p> <p>Sickness Claims</p> <p>The sound of hidden agenda</p>	<p>Caution</p> <p>Emotional plays</p>

	<ol style="list-style-type: none"> 1. Lower your blood viscosity by drinking 8-10 glasses of warm water everyday. 2. Enhancing your blood flow by exercising or repositioning your bones, which will increase your blood flow 3. Don't eat meat, fries or sweets. They're causing a lot of free radicals (organic molecules responsible for aging, tissue damage) leading to Embolism 4. Never drink cold water. Don't ignore this, don't drink it and do share it to others. 				
<p>67</p>	<p>You won't believe this, eating chicken skin and hogs can cure diabetes and obesity by Dr. Bunjob Chunhasawasdikul</p> <p>Eating chicken skin and hogs can cure diabetes and obesity</p> <p>"hogs and chicken skin, you can eat it and cure diabetes and obesity" I told the members who attended the one-day workshop at Bulvee for whomever that wants to control their blood sugar and lose weight by detoxing their pancreas.</p> <p>"Whoa... How that could possibly be?" Many are questioning, like when you are not agreeing with the referee in the boxing ring, It is against all the audiences minds, they have been told for over 40 years that whomever is overweight needs to not eat duck or chicken skin and their favourite hogs due to their high calories and fat.</p> <p>By these teachings, Animal fats are dangerous for your health; It makes you fat both internally and externally. Internal fat means high Cholesterol which leads to heart disease and hypertension. External fat is obesity, Diabetes etc.</p> <p>That's why Lard, Pork skin, Pork belly; Hogs are all blacklisted for good health and also chicken skin too.</p> <p>But I'm announcing to all those people who want their diabetes to get better that they can eat chicken skin and hogs. Not only they cure diabetes but also lose weight.</p> <p>"It's true, I told you" said Ms.Tippawan</p>	<p>Eating chicken skin, hogs can cure diabetes and obesity by Dr. Bunjob Chunhasawasdikul.</p> <p>There is a study called Framingham study which conducted by Heart disease institute of America in 1960. The hypothesis was there are factors that increasing heart and vascular diseases such as cholesterols, smoking, alcohol consumption, weight, diabetes and gout. Excercising and HDL-Chol are the factors lowering the risk.</p> <p>This is the beginning of cholesterol ghost story. Animal fat had become an evil for health creating the trend for not eating pork products and chicken skin need to be removed.</p>	<p>Eating chicken skin, hogs can cure diabetes and obesity.</p> <p>There was misleading. To be plain-spoken if the fact that cholesterol is related to heart disease and animal fat making you fat and having hyperlipidemia, It will be good for business for vegetable oil.</p>	<p>Treatment Claims</p> <p>Academic Claims</p>	<p>Hope</p> <p>The making of reliability</p>

<p>Ms.Tippawan is one of the members whom I invited to encourage the people who attended the workshop. She lost 10 kilograms in 6 months and required less insulin, from 40 Units per day to Zero and reduced the use of anti-diabetic drugs from 4 to 1 tablet per day. Her triglycerides lowered from 253 mg% to 163 mg% and dumped all of her lipid-lowering drug for 6 months.</p> <p>“When the doctor told me to eat hogs and that chicken skin does not need to be removed, I did not believe, just like you”.</p> <p>Because other doctors always inhibit us to eat anything, diabetic patients like me don't know what to eat. When insulin is injected, I'm hungry so I eat whatever is in front of me but when I can't eat pork or chicken I have only fruit and snacks. I forgive myself everytime, my blood sugar did go up and my body get even fatter” She said “But the pancreas-detoxing formula, I can eat chicken skin and hogs”</p> <p>“But I have 1 request that you won't eat any carbohydrates and fruit, never eat them, they are evils that destroy our health. We are fat, have high blood-triglycerides and cholesterols and diabetes because of carbohydrates, we are scared of meat and fat, that means that we are all wrong as we see all the saints are devils and vice versa”.</p> <p>Nowadays people cannot determine friends or enemies because of advertisements. The story begins 40-50 years ago. I may have to tell you the story once again.</p> <p>There is a study called Framingham study which was conducted by Heart disease institute of America in 1960. The hypothesis was there are factors that increase heart and vascular diseases such as cholesterol, smoking, alcohol consumption, weight, diabetes and gout. Exercising and HDL-Chol are the factors lowering the risk. This is the beginning of a 'cholesterol ghost story'. Animal fat had become an evil for health creating the trend for not eating pork products and the need to remove chicken skin.</p>	<p>40 years later there was an international conference in 1999, There was a critic who told about Framingham study</p> <p>“Even Framingham found a correlation of cholesterol and heart disease in men but it is not found in elderly and women and even in men and middle-aged the research never proved the relationship between heart disease and cholesterol in food that is truly related. Clinical study cannot prove that saturated fat is the cause of heart disease”</p> <p>So the references to Framingham study to campaign against animal fat were a quick summary and over-interpretation. Also even Framingham study found that other factors were related with cardiovascular disease such as non-exercising, obesity, smoking, alcohol which are proved that all were related but with unidentified cause the summary only mentioned mainly on cholesterol</p> <p>To be plain-spoken if the fact that cholesterol is related to heart disease and animal fat</p>			
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<p>40 years later there was an international conference in 1999, There was a critic who told about the Framingham study:- “Even Framingham found a correlation of cholesterol and heart disease in men but it is not found in the elderly and women and even in men and the middle-aged the research never proved the relationship between heart disease and cholesterol in food that is truly related. Clinical study cannot prove that saturated fat is the cause of heart disease”</p> <p>So the references to the Framingham study to campaign against animal fat were a quick summary and an over-interpretation. Also even though the Framingham study found that other factors were related with cardiovascular disease such as non-exercising, obesity, smoking, alcohol which are proved that all were related, but with unidentified cause the summary only mentioned mainly on cholesterol.</p> <p>To speak plainly, if the fact that cholesterol is related to heart disease and animal fat makes you fat and have hyperlipidemia, it will be good for business for vegetable oil. These two factors have become an overly referred campaign but there are no medicines to enhance the exercise or to stop you from smoking so there is no business to promote these factors.</p> <p>By all of this, we were mislead and removed the chicken skin, what a shame.</p> <p>So who has diabetes and consciously might think that is why our blood sugar goes up?</p> <p>Because of those carbohydrates, but proteins, fat and vegetables are not directly a cause of blood sugar. So if we cut all carbohydrates and eat meat and vegetables instead even adding fat is not against the rules, but I have to highlight that this is for Diabetes type-2 which is mainly in adults and is related with diet.</p> <p>Type-1 Diabetes is insulin-dependent and much more complex, is not recommended for this method.</p>	<p>making you fat and having hyperlipidemia, It will be good for business for vegetable oil. These two factors have become an overly referred campaign but no medicines to enhance the exercise or smoking cessation so there is no business to promote these factors.</p> <p>And now eating pork, chicken and vegetables are going to satisfy you. The problem is when we short of carbohydrates which are the quickest way to obtain energy for our body. You will get hungry very often and the people who thought that staving is the way of losing weight will feel guilty if they eat at full course. Changing the diet plan and still eating under your need, some eat only salads no meat these people always get hungry during the meal and cannot be tolerated for snacks and fruits which leading to unsuccessful diet control</p>			
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	<p>For Obesity, even rich, fatty food has more calories than carbohydrates, but you need to know 1 thing, a major factor that is mistaken is that we eat rice flour, snacks and fruit, by just stopping eating these means you have already defeated that evil.</p> <p>And now eating pork, chicken and vegetables are going to satisfy you, the problem is when we are short of carbohydrates which are the quickest way to obtain energy for our body. You will get hungry very often and the people who thought that staving is the way to lose weight will feel guilty if they eat a full course. Changing the diet plan and still eating only what you need, some eat only salads and no meat, but these people always get hungry during meals and cannot be tolerated for snacks and fruits which leading to unsuccessful diet control.</p> <p>The Solution of this is to brainwash yourself, meat is good, fat is edible, We don't need you to eat only vegetables but require you to eat 1 portion of meat, 2 portions of vegetables and it is you who knows how much to eat.</p> <p>And the fatty food in dinner is essential, tt makes your stomach full, but if you eat only salad you will eat again at midnight anyway.</p> <p>I repeated this to everyone who loved to enter the workshop to never remove chicken skin again, you can eat hogs even the Pa-loh hog soup as it will lower your weight. For Diabetic patients you can eat Tom-yum hogs, it is delicious and good for diabetes.</p> <p>"So you guys are cheered up now?" and the workshop members laughed so hard.</p> <p>Source: Weekly Matichon</p>				
68	<p>Research from Cornell University, United States published a paper in the Chemical Journal Association that cooked sweetcorn can remove toxins in the body.</p>	<p>Researcher from Cornell University, United States published a paper in the Chemical Journal Association</p>	<p>Cooked sweet corn can remove toxic in the body, reported by Researcher from</p>	<p>Treatment Claims Academic Claims</p>	<p>Hope</p>

	<p>We normally know that cooked vegetables and fruit will lose its vitamins so we would rather eat it fresh. However, sweetcorn is not suitable to eat fresh. We are lucky that sweetcorn still keep its nutrition for removing toxins even if it is cooked. Even if it will lose some of the Vitamin C but this is not essential because we do not expect Vitamin C from sweetcorn anyway.</p> <p>The Researchers demonstrated the corn by boiling it at 115 C in different periods of time at 10, 25 and 50 minutes. The results show that the longer sweetcorn is boiled, the more of toxin removing substance increases, by 22% ,44% and 53 % respectively. The Researcher believes that this substance can get rid of toxins from the oxidants that is hazardous to the body. Also, the oxidants can cause Cataract, Alzheimers, heart attack and cancer.</p> <p>Our hero that removes the toxins is Ferulic acid that supports the effectiveness of the body's immune system. The acid is an anti-oxidant which helps against aging, protecting against cancer cells, heart attack, support muscles, protecting against Ultra Violet that cause skin cancer. Researchers said that cooked or grilled sweet corn will release Ferulic acid. More heat will release more acid which is more beneficial to the body. Because the Ferulic acid is in the range of chemical plant, there is a lot of it in corn. Cooking the corn will help to release the acid.</p> <p>Not only does it protect against the chance of having cancer, for those cancer patients who eat sweetcorn will be much better because the acid can wash away chemical toxins from chemotherapy.</p>	<p>that cooked sweet corn can remove toxic in the body.</p> <p>Researcher demonstrates the corn by boiling it at 115 C in different period of time at 10, 25 and 50 minutes. The result shows that the longer sweet corn is boiled, the more about of toxic removing substance can increase at 22,44 and 53 % respectively. Researcher believes that this substance can get rid of toxic from the oxidants that is hazardous in the body. Also, the oxidants can cause Cataract, Alzheimer, heart attack and cancer.</p>	<p>Cornell University, United States.</p>		<p>The making of reliability</p>
69	<p>If you bring ginger to boil with these 3 ingredients it will effectively remove nicotine in lungs!</p> <p>Smoke is bad for lungs. Smoking is bad for health but there are a lot of people who still smoke, including non-smokers who cannot avoid the smoke because they have to stay close to those people who do smoke. Non-smokers will get worse effects than smokers. It is really unfair.</p>	<p>Boiling ginger with turmeric, water, sugar, garlic to clean a lung for the smoker.</p> <p>We do not need to afraid about it because we have the method to remove nicotine from lungs.</p>	<p>Boiling ginger with turmeric, water, sugar, garlic to clean a lung for the smoker.</p>	<p>The use of exclamation sign Magic Recipe/Formula Treatment Claims</p>	<p>Emotional plays Hope</p>

	<p>Everyone knows what their lungs will be like if they take much smoke. Today, we do not need to be afraid about it because we have the method to remove nicotine from lungs. Let's see how to do it.</p> <p>Ingredients</p> <ol style="list-style-type: none"> 1. 1 ginger 2. 2 tablespoons of turmeric 3. 1 litre of water 4. 400 g of garlic 5. 400 g of sugar <p>Instructions</p> <ol style="list-style-type: none"> 1. Slice ginger and garlic in to small pieces. 2. Boil water. 3. Put sugar into the water and boil until sugar is dissolved. 4. Put ginger, garlic and turmeric into the water and stir it. 5. Wait until it is boiled, Turn the heat off and wait until it is cool and put it in the bottle. <p>To eat: 2 tablespoons for twice a day in the morning and evening. Keep eating for a week. Your lungs will be cleaner.</p> <p>The main herbs that helps your lungs and protects against lung cancer from smoking is</p> <ol style="list-style-type: none"> 1. Turmeric that maintain the lungs. It protects lungs from having cancer and nasal allergy. 2. Garlic: A Chinese scientist found that garlic can protect against lung cancer. They have a research paper that non-smokers who eat food containing a lot of garlic have 33% less risk to have lung cancer compared to those who smoke. <p>Putting these two ingredients will relieve uncomfortable breathing or destroyed lungs will become well again.</p>	<p>The method to clean a lung with ginger and other ingredients.</p> <p>It also helps to protect the lung cancer.</p>	<p>It also helps to protect the lung cancer.</p>		
70	<p>Fruit and vegetable juice recipe from Thai Royal Highness Princess Chulaporn.</p> <p>2 of my colleague's cousins have cancer. One of them is appointed to have chemotherapy and the second is asked to wait and have a rest</p>	<p>Fruit and vegetable juices recipe from Thai Royal Highness Princess Chulaporn.</p> <p>It can cure cancer.</p>	<p>Fruit and vegetable juices recipe from Thai Royal Highness Princess</p>	<p>Royal Family Claims Magic Recipe/Formula</p>	<p>The making of reliability Hope</p>

	<p>for 1-2 weeks before starting treatment. At that time, my colleagues get this recipe so she asks her cousins to instead drink 1 litre of water for 2 weeks. After that the doctor does not find any tumour in the first person while the size of tumour in the second person is getting much smaller. It is unbelievable. The doctors are so surprised and ask for the recipe. A lot of my colleagues also ask for and drink it to help their immune system. Those who have friends or family with cancer can follow this recipe and forward to others. This fruit and vegetable juice comes from the royal palace. It helps to have better help especially those who have cancer. My neighbour who has cancer is aged 80 years old and needs to do chemotherapy. He also drinks this juice. He became healthier after drinking it for less than a month. His hair also grows back. The doctor is excited. Try this recipe. It will help your health more or less. It is also cheap.</p> <ol style="list-style-type: none"> 1. 1 Apple 2. 1 Carrot 3. 3 leaves of Iceberg lettuce 4. 2 pieces of Tung-Oh (garland chrysanthemum – Chinese vegetables) 5. 1 Lime 6. ½ glass of Passion fruit 7. ½ glass of honey 8. ½ glass of water 9. 1 Guava 10. 5 tomatoes 11. 3 tablespoons of sugar <p style="text-align: center;">Blend it all together.</p>	<p>At that time, my college get this recipe so she asks her cousins to drink instead of water for 1 litre for 2 weeks.</p> <p>The doctors are so surprised and ask for the recipe.</p> <p>The recipe of vegetable juices</p>	<p>Chulaporn to help treat cancer</p>	<p>Treatment Claims</p>	
71	<p>Some people working in the hospital close to the sea have stated not to eat crab with yoghurt and you must eat banana immediately. It is hazardous. There is already a child who died from this. No matter how busy you are, please forward to your loves. Do not even miss the seconds.</p>	<p>Eating crab with yoghurt is hazardous. You must eat banana immediately. There is already a child who died from this</p>	<p>Eating crab with yoghurt is hazardous. You must eat banana immediately. There is already a child who died from this</p>	<p>Hazardous Claims</p>	<p>Caution</p>

72	<p>For those who love to eat prawns. My father was going to cook for me but I can see that one side of it's cheeks are big. I decided to remove it and OMG!!! It was a parasite. I randomly picked up 30 prawns but found this in 26 prawns. Before eating please be careful. After removing the parasite please throw away all because they still leave over 100 of their eggs.</p>	<p>My father and I found a parasite in prawns. I randomly picked up 30 prawns but found in 26 prawns. Before eating please be careful. They still have their eggs over 100.</p>	<p>Parasites found in prawns</p>	<p>Hazardous Claims</p>	<p>Caution</p>
73	<p>A Chinese doctor found that a 5 year old child has a cancer. The director at Chen-Du hospital, China said that the patient's background reports that there is a 5 year old child that has a cancer but none of his family had cancer before. The Doctor then concludes that having cancer may come from eating some foods. Thus, there is advice from the doctor about food which should not be eaten:-</p> <ol style="list-style-type: none"> 1. Instant noodle: One bowl of instant noodle has over 25 kinds of artificial substances such as Monosodiumglutamate, Citric acid, TBHQ (preservatives) etc. Thus, a child who often eats instant noodles may have a low level of calcium in the blood. 2. Ham and Sausage: They contain a lot of artificial ingredients such as Sodiumnitrite, Potassiumnitrite etc. Nitrite can interact with amine and become cancer active. Even more dangerous is Nitrosamine that causes liver cancer, gastric cancer and Esophageal Cancer 3. Cookies: it has artificial substances which are Sodiummatabisalfite, Citric Acid, and Sorbitol. If using over the standard will cause sulphur left into it and it is hazardous to people. 4. Ice-Cream: it has artificial substances which are smell garnish, colour garnish, Diethiglucol etc. Those substances are hazardous to the body. Some countries already prohibit some of colour garnish in the food. 5. Potato Chips: it has artificial substances such as Monosodiumglutamate, Disodium, 5-Gudnilate and etc. Those substances are prohibited for using in baby food and child food. 6. Dried fruit: it has artificial substances such as Citric acid, Potassium, Sorbet; Sodiumbensoate especially "Sodiumbensoate" is the contaminated substance which decreases the growth of bacteria and some types of mould. IF 	<p>Chinese doctor found 5 year old child has a cancer. Doctor then concludes that having a cancer may come from eating some foods. Thus, there is advice from doctor about foods which should not eat e.g. instant noodle, ham and sausage, cookies, ice-cream, potato chips etc.</p>	<p>Doctor diagnosed a child having a cancer because the child should have eaten some foods.</p>	<p>Hazardous Claims Sickness Claims</p>	<p>Caution</p>

	<p>used in high quantity, it will irritate the stomach, cause weight loss and cause diarrhoea. It also effects internal body tissue. It can cause internal bleeding of the liver and kidneys, ending up with paralysis and death.</p> <p>7. Chewing gum: it has artificial substances such as sweetener, Sorbitor, Citric acid. Eating too much Sorbitol can cause diarrhoea and flatulence.</p> <p>8. Jelly: it has artificial substances such as Potassium, Sorbate, Citric, Carajenan and etc. If patients used to have stomachache because of food, it would be because of sensitivity to gluten which is the protein in barley. If patients have diarrhoea it will be because the patient has a lack of enzymes to digest lactose sugar or the stomach is sensitive to carajenan.</p> <p>9. Milk tea: it has artificial substances such as Potassium, Sorbet, Sodiumhegzametaphosphate etc. The tea leaves have a lot of Oxalate. If we drink milk tea every day, this accumulates in the body leading to renal insufficiency or renal stone may occur.</p> <p>In fact, we cannot avoid these kids of foods 100%. Children are just children. We can let them eat some of it.</p>				
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Appendix B (Interview Questions)

Q 1: What is your framework of communication on the issues of false food information / false information?

Q 2 What do you think about the important character of food rumours?

Q 3 What do you think about the most important tool to communicate about food rumours?

Q 4 What do you think about the most vulnerable group believing in false food rumour?

Q 5 What do you think about the feedback after debunking food rumours?

Q 6 What do you think about the long-term solutions to the food rumours?

Q 7: What is your framework of science communication to public?

Q 7 (1): What do you think about science communication in Thailand?

Q 7 (2): My assumption is that Thai people do not want to listen to science; do we need to have an issue that links their life to science?

Q 7 (3): From the amount of rumour shared, it shows that Thai people lack common science knowledge in some issues e.g. the cause of AIDs. I assume that to raise the attention on science among Thai people, do we need to begin with these everyday issues or their interest rather than scientist speaking?

Q 7 (4): Since we found that people perceive false information and the expert later debunk it, then the experts receive trust. Can we regard science communication in Thailand is in reverse way because normally scientists are likely to be the ones who begin communicating science?

Q 7 (5): My assumption of a science communication state would be the first stage is where the public would receive the knowledge from the experts. What do you think?

Q 7 (6): Can Thai people increase their performance to have the discussion with the expert in the future?

Q 7 (7): To what extent you think we speak scientifically?

Q 7 (8): Do you still think that you will keep communicating science knowledge?

Q 7 (9): How you consider your position about the communication of science to the public?

Q 7 (10): What is your framework of science communication to public?

Appendix B (Survey Questionnaire)

Q0 Introduction

This questionnaire is about exploring the experience with the information about food, health and science in social media. It is an important part of my PhD at the University of Essex. Also, it will be worthwhile of having your participation. The survey should not take more than 10 minutes, and your response are completely anonymous.

Thank you for your response.

End of Block: Introduction

Start of Block: Block 1

Q1 Do you know the story of soursop and cancer treatment?

- Yes (1)
 - No (2)
 - Partially know (3)
-

Q2 What do you think about curing cancer by soursop?

- It can be able to cure (1)
- It cannot be able to cure (2)
- I am not sure about it (3)

End of Block: Block 1

Start of Block: Block 2

Q3

Read the following message and answer the questions below

Soursop and the cancer treatment, Thai alternative medicine. There is a report from Thai Alternative Medicine (2014) about Soursop has special qualities that helps cure sickness, especially cancer. There are a lot of studies about preventing the cancer cells, also the texture of soursop are full of nutrients and vitamins such as carbohydrate, fructose, pectin, vitamin C, vitamin B1 and B2. The potassium in soursop provides a wide range of curing as same as medicine for infection of bacteria. 1.The extract from soursop has its effectiveness to kill 12 types of cancer cells; colorectal cancer, breast cancer, lung cancer etc. 2.The elements of soursop has proved that it has over 10,000 times to reduce the growth of cancer cells causing the slow the growth of cancer cell, beyonding chemotherapy or Adriamycin, the normal cancer medicine. 3. The extracts from the soursop selects to kill cancer cells only. It is not harmful to normal cells in the body. The other parts of soursop including skin, leaf, seeds have been used for ages by the local doctor and natives in Latin America. They used in curing heart diseases, asthma, arthritis.

Sources, Thai alternative medicine (2557), Soursop against cancer better than chemo, Bangkok, (printing company) 66-72

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
After I read this information, I trust this information that the Thai Alternative medicine provided. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I would like to share it on social media (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I think the	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

information
is convincing
(4)

After I read
this
information,
I think the
information
is logical (7)



After I read
this
information,
I think the
information
about this
message
support what
I have
believed (9)



End of Block: Block 2

Start of Block: Block 3

Q4 Read the following message and answer the questions below

In response to this statement, the scientist lecturer at Chulalongkorn University who is also scientist social influencers, said that the extracts from soursop is harmful to nerve and kidney.

Even though the soursop can be developed in to cancer medicine or co operate with chemotherapy in the future. However, the studies found that the 'Annonacin' is poisoned to nerve. Moreover, the research studies in Gana also found that a mouse that has been received a large amout the extracts from soursop has effected on its kidney. Thus, using sorsop to kill cancer effectively and safely still require a lot of further studies such as the process to kill the original cancer cell, communication within the cell, the controlling of standard also toxicology and safety.

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
After I read this information, I trust the information that the scientist social influencers provided. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I would like to share it on social media. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I think the argument about the soursop is convincing (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I think the argument about the soursop is logical (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I think the information about this	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

message
support what
I have
believed (8)

I think the
scientist social
influencers
have a good
understanding
of the cancer
treatment
(10)

I think the
scientist social
influencers
are usually
speaking
honestly to
the public (11)

I think I share
the similar
values to the
scientist social
influencers
about the
cancer
treatment
(12)



Q5 Read the following message and answer the questions below

In response to this statement, The Department of medical science, Ministry of Public health said that it is clear that the trend of eating soursop to kill cancer is not true. It is not 100% safety. It also has side effects.

The international research found that the extract from soursop has an anti oxidants. It can kill cancer cells such as breast cancer, lung cancer, skin cancer. However, soursop has its toxic to never. The international studies found that a mouse that received the soursoup extracts has its effects to their kidney.

Thus, it is not appropriate the consume soursop to kill cancer. It has to wait for dividing the elements of killing cancer and the elements of harming the nerves. It will be safely consumed.

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
After I read this information, I trust the information that Ministry of Health provided. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I would like to share it on social media. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I think the argument about the soursop is convincing (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I think the argument about the soursop is logical (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I think the	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

information about this message support what I have believed (7)

I think the Department of Medical Science, Ministry of Public Health have a good understanding of the cancer treatment (10)

I think the Department of Medical Science, Ministry of Public Health are usually speaking honestly to the public (11)

I think I share the similar values to the Department of Medical Science, Ministry of Public Health about the cancer treatment (12)

Q6 Read the following message and answer the questions below

In response to this statement, The Department of medical science, Ministry of Public health said that the extracts from soursop is harmful to nerve and kidney.

Even though the soursop can be developed in to cancer medicine or co operate with chemotherapy in the future. However, the studies found that the 'Annonacin' is poisoned to nerve. Moreover, the research studies in Gana also found that a mouse that has been received a large amout the extracts from soursop has effected on its kidney. Thus, using sorsop to kill cancer effectively and safely still require a lot of further studies such as the process to kill the original cancer cell, communication within the cell, the controlling of standard also toxicology and safety.

	Somewhat agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
After I read this information, I trust the information that Ministry of Health provided. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I would like to share it on social media. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I think the argument about the soursop is convincing (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I think the argument	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

about the
soursop is
logical (5)

After I read
this
information, I
think the
information
about this
message
support what
I have
believed (9)

I think the
Department of
Medical
Science,
Ministry of
Public Health
have a good
understanding
of the cancer
treatment
(11)

I think the
Department of
Medical
Science,
Ministry of
Public Health
are usually
speaking
honestly to
the public
(12)

I think I share
the similar
values to the
Department of
Medical
Science,
Ministry of
Public Health
about the
cancer



treatment
(13)

Q7 Read the following message and answer the questions below

In response to this statement, the scientist lecturer at Chulalongkorn University who is also scientist social influencers said that it is clear that the trend of eating soursop to kill cancer is not true. It is not 100% safety. It also has side effects.

The international research found that the extract from soursop has an anti oxidants. It can kill cancer cells such as breast cancer, lung cancer, skin cancer. However, soursop has its toxic to never. The international studies found that a mouse that received the soursoup extracts has its effects to their kidney.

Thus, it is not appropriate the consume soursop to kill cancer. It has to wait for dividing the elements of killing cancer and the elements of harming the nerves. It will be safely consumed.

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
After I read this information, I trust the information that the scientist social influencers provided. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I would like to share it on social media. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I think the argument	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

about the
source is
convincing (2)

After I read
this
information, I
think the
argument
about the
source is
logical (5)



After I read
this
information, I
think the
information
about this
message
support what
I have
believed (7)



I think the
scientist social
influencers
have a good
understanding
of the cancer
treatment
(10)



I think the
scientist social
influencers
are usually
speaking
honestly to
the public
(11)



I think I share
the similar
values to the
scientist social
influencers
about the
cancer
treatment
(12)



End of Block: Block 3

Start of Block: Block 4

Q8 Do you know the story of fake eggs?

- Yes (1)
- No (2)
- Partially Know (3)
-

Q9 What do you think about the fake eggs?

- I think it is true (1)
- I think it is false (2)
- I am not sure about it (3)

End of Block: Block 4

Start of Block: Block 5

Q10

Read the following message and answer the questions below

Nation TV - <http://www.nationtv.tv/main/content/378489367/>

Chiang Rai - 12 February 2016, Ms Ratchanee Chobjit, Scientist Teacher and her student was conducted an experiment of eggs after found it is fake. From the experiment, the eggs show different chemical effect compared to real eggs. The yolk in real eggs is still in the shaped of oval but the yolk in the fake eggs cannot stay in its oval shape.

The teacher explains that the eggs was not natural made rather it processed with the chemical, making it look like real. The students have bought it from the local food truck. Their family also uses it for cooking and later they found the texture looks like a powder. Overall, they suggested that it is fake. Teacher and students are scared to eat it.

Later, the staff of local health support from Chaing Rai has collected the eggs to test in the lab. The result will be announced next week.

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
After I read this information, I trust this information that the scientist teacher is provided. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I would like to share it on social media. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I think the information is convincing (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I think the information is logical (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I think the information about this message support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

what I have
believed (9)

End of Block: Block 5

Start of Block: Block 6

Q11 Read the following message and answer the questions below

In response to the statement, the owner of science and health Facebook fanpage said about fake eggs that

Following the number of shares, it is not the fake eggs. All those qualities mentioned is the anatomy of eggs which is normal. The eggs that well set is the good quality one which is able to eat raw. The fake eggs story has been a rumour for a long time. If someone would like to produce it, it is required a high technology to earn the profits.

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
After I read this information, I trust the information that the owner of science and health Facebook fanpage provided. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I would like to share it on social media. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I think the argument about the fake	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

eggs is
convincing (3)

After I read
this
information, I
think the
argument
about the fake
eggs is logical
(6)



After I read
this
information, I
think the
information
about this
message
support what
I have
believed (8)



I think the
owner of
science and
health
Facebook
fanpage have
a good
understanding
of the issues
of fake food
(10)



I think the
owner of
science and
health
Facebook
fanpage are
usually
speaking
honestly to
the public
(11)



I think I share
the similar
values to the
owner of



science and
health
Facebook
fanpage about
the issues of
fake food (12)

Q12 Read the following message and answer the questions below

In response to this statement, Minister of Public Health - there are fake eggs from China sold illegally in the market. It has to be informed that the composition of fake eggs do not provide any benefits for health while it will be harmful from its chemical. The inspection of fake eggs is being processed from the network of local public administration including the local and imported eggs. After randomly inspection in the market, none of fake eggs are found.

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
After I read this information, I trust the information that Minister of Public Health provided. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I would like to share it on social media. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I think the argument about the fake	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

eggs is
convincing (2)

After I read
this
information, I
think the
argument
about the fake
eggs is logical
(5)



After I read
this
information, I
think the
information
about this
message
support what
I have
believed (9)



I think
Minister of
Public Health
have a good
understanding
of the issues
of fake food
(10)



I think
Minister of
Public Health
are usually
speaking
honestly to
the public
(11)



I think I share
the similar
values to
Minister of
Public Health
about the
issues of fake
food (12)



Q13 Read the following message and answer the questions below

In response to this statement, Minister of Public Health said that following the number of shares, it is not the fake eggs. All those qualities mentioned is the anatomy of eggs which is normal. The eggs that well set is the good quality one which is able to eat raw. The fake eggs story has been a rumour for a long time. If someone would like to produce it, it is required a high technology to earn the profits.

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
After I read this information, I trust the information that Minister of Public Health provided. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I would like to share it on social media. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I think the argument about the fake eggs is convincing (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I think the argument about the fake eggs is logical (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

After I read this information, I think the information about this message support what I have believed (8)

I think Minister of Public Health have a good understanding of the issues of fake food (10)

I think Minister of Public Health are usually speaking honestly to the public (11)

I think I share the similar values to Minister of Public Health about the issues of fake food (12)

Q14 Read the following message and answer the questions below

In response to this statement, the owner of science and health Facebook fanpage said that there are fake eggs from China sold illegally in the market. It has to be informed that the composition of fake eggs do not provide any benefits for health while it will be harmful from its chemical. The inspection of fake eggs is being processed from the network of local public administration including the local and imported eggs. After

randomly inspection in the market, none of fake eggs are found.

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
After I read this information, I trust the information that the owner of science and health Facebook fan page provided. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I would like to share it on social media. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I think the argument about the fake eggs is convincing (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this information, I think the argument about the fake eggs is logical (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After I read this	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

information,
I think the
information
about this
message
support
what I have
believed (5)

I think the
owner of
science and
health
Facebook
fanpage are
usually
speaking
honestly to
the public
(6)

I think I
share the
similar
values to the
owner of
science and
health
Facebook
fanpage
about the
issues of
fake food (7)



End of Block: Block 6

Start of Block: Block 7

Q15 Gender

Male (1)

Female (2)

Q16 Age (for the last birthday)

Q17 Educational level

- Less than high school (2)
 - Junoir High School (8)
 - Senior High School (9)
 - Bachelor Degree (5)
 - Master Degree (6)
 - Doctoral Degree (10)
-

Q18 How long do you spend time on Facebook in everyday?

- Below 1 hour (6)
 - Between 1-3 hours (2)
 - Between 4-6 hours (3)
 - Between 7-9 hours (4)
 - Between 10-12 hours (7)
 - More than 12 hours (8)
-

Q19 How often have you ever seen the information about food and science on Facebook?

- Never (4)
- Seldom (5)
- Sometimes (6)
- Frequently (7)
- Always (8)

End of Block: Block 7

Start of Block: Block 8

Q56 Thank you for your response!

End of Block: Block 8

Appendix B (Ethical Approval)



PC

Application for Ethical Approval of Research Involving Human Participants

This application form must be completed for any research involving human participants conducted in or by the University. 'Human participants' are defined as including living human beings, human beings who have recently died (cadavers, human remains and body parts), embryos and fetuses, human tissue and bodily fluids, and human data and records (such as, but not restricted to medical, genetic, financial, personnel, criminal or administrative records and test results including scholastic achievements). Research must not commence until written approval has been received (from departmental Director of Research/Ethics Officer, Faculty Ethics Sub-Committee (ESC) or the University's Ethics Committee). This should be borne in mind when setting a start date for the project. Ethical approval cannot be granted retrospectively and failure to obtain ethical approval prior to data collection will mean that these data cannot be used.

Applications must be made on this form, and submitted electronically, to your departmental Director of Research/Ethics Officer. A signed copy of the form should also be submitted. Applications will be assessed by the Director of Research/Ethics Officer in the first instance, and may then be passed to the ESC, and then to the University's Ethics Committee. A copy of your research proposal and any necessary supporting documentation (e.g. consent form, recruiting materials, etc) should also be attached to this form.

A full copy of the signed application will be retained by the department/school for 6 years following completion of the project. The signed application form cover sheet (two pages) will be sent to the Research Governance and Planning Manager in the REO as Secretary of the University's Ethics Committee.

1. Title of project:

Misinformation on food, Science and Risk communication in Social media and Trust

2. The title of your project will be published in the minutes of the University Ethics Committee. If you object, then a reference number will be used in place of the title.
Do you object to the title of your project being published? No

3. This Project is: **Student Project**

4. Principal Investigator(s) (students should also include the name of their supervisor):

Name:	Department:
Prof. Nick Allum	Sociology

5. Proposed start date: **15 November 2017**

6. Probable duration: **6 months (until 15 April 2018)**

7. Will this project be externally funded?
If Yes,

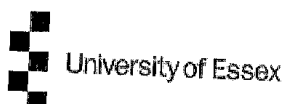
Yes



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8. What is the source of the funding?

Thai government



9. If external approval for this research has been given, then only this cover sheet needs to be submitted
External ethics approval obtained (attach evidence of approval) No

Declaration of Principal Investigator:

The information contained in this application, including any accompanying information, is, to the best of my knowledge, complete and correct. I/we have read the University's *Guidelines for Ethical Approval of Research Involving Human Participants* and accept responsibility for the conduct of the procedures set out in this application in accordance with the guidelines, the University's *Statement on Safeguarding Good Scientific Practice* and any other conditions laid down by the University's Ethics Committee. I/we have attempted to identify all risks related to the research that may arise in conducting this research and acknowledge my/our obligations and the rights of the participants.

Punjapha Pitigraisorn

Signature(s):

Name(s) in block capitals:PUNJAPHA PITIGRAISORN.....

Date: 11 October 2017

Supervisor's recommendation (Student Projects only):

I have read and approved the quality of both the research proposal and this application.

Supervisor's signature: *Nick Allen*

Outcome:

The departmental Director of Research (DoR) / Ethics Officer (EO) has reviewed this project and considers the methodological/technical aspects of the proposal to be appropriate to the tasks proposed. The DoR / EO considers that the investigator(s) has/have the necessary qualifications, experience and facilities to conduct the research set out in this application, and to deal with any emergencies and contingencies that may arise.

This application falls under Annex B and is approved on behalf of the ESC ✓

This application is referred to the ESC because it does not fall under Annex B

This application is referred to the ESC because it requires independent scrutiny

Signature(s): *Saber Crowhurst*

Name(s) in block capitals:SABER CROWHURST.....

Department:SOCIOLOGY.....

Date:9-11-17.....

The application has been approved by the ESC

The application has not been approved by the ESC

The application is referred to the University Ethics Committee

Signature(s):

Name(s) in block capitals:



University of Essex

Faculty:

Date:



Details of the Project

1. **Brief outline of project** (This should include the purpose or objectives of the research, brief justification, and a summary of methods but should not include theoretical details. It needs to be understandable to a lay person, i.e. in everyday language that is free from jargon, and the reviewer must be able to understand what participants will be asked to do.)

This study explores risk issues from misinformation about food in Facebook in Thailand while applying science communication and risk communication framework in order to deal with the misinformation. The objectives are to obtain the structure of misinformation message about food, considering science and risk communication from online influencers and other formal stakeholders on communicating truth to the public and analyzing how people trust the misinformation message. The methods will be divided into three parts; content analysis for analyzing misinformation about food, in-depth interview on online influencers and relevant stakeholders and experimental online survey for investigating trust in misinformation among respondents.

Participant Details

2. Will the research involve human participants? (indicate as appropriate)

Yes

3. Who are they and how will they be recruited? (If any recruiting materials are to be used, e.g. advertisement or letter of invitation, please provide copies).

The research will directly involve human in the part of in-depth interview only (in obtaining the view of science and risk communication). They are online social influencers and experts who are on Facebook such as scientists, academics or doctors. Also, the interviewees will be other relevant stake holders such as staff from consumer foundations, food-protection foundations.

Will participants be paid or reimbursed?

No

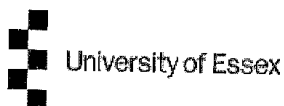
4. Could participants be considered:

(a) to be vulnerable (e.g. children, mentally-ill)?

No

(b) to feel obliged to take part in the research?

No



If the answer to either of these is yes, please explain how the participants could be considered vulnerable and why vulnerable participants are necessary for the research.

(c)

Informed Consent

5. Will the participant's consent be obtained for involvement in the research orally or in writing?¹
(If in writing, please attach an example of written consent for approval):

Yes

If in writing, please tick to confirm that you have attached an example of written consent Yes

Consent should be obtained before data is collected.

How will consent be obtained and recorded? **Consent letter will be signed.**

Who will be giving consent? **All interviewees involved; online influencers and staffs from organizations**

Please indicate at what stage in the data collection process consent will be obtained. **In the in-depth interview. The participant will be given the information sheet and consent letter. The letter is required to be signed before starting the interview.**

If consent is not possible, explain why. **It is the right for participant to decide whether they wish to participate the interview after the information given.**

Please attach a participant information sheet where appropriate. **(Attached)**

Confidentiality / Anonymity

¹ If the participant is not capable of giving informed consent on their own behalf or is below the age of consent, then consent must be obtained from a carer, parent or guardian. However, in the case of incompetent adults, the law in the United Kingdom does not recognize proxy consent by a relative. In addition, the University Ethics Committee is not able to provide ethical approval for such research. It needs to be approved by a Health Research Authority National Research Ethics Service Research Ethics Committee.



6. If the research generates personal data, describe the arrangements for maintaining anonymity and confidentiality or the reasons for not doing so.

This research will not involve any personal data from interviewees apart from their opinions towards the research issues. However, the study requires stating the name of the target interviewees and organizations as to provide a clear context of the science and risk communicators. If the interviewees does not give a permission to use their name. The interviewees name will be use as 'scientists' or 'organizations or foundation's name' instead.



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Data Access, Storage and Security

7. Describe the arrangements for storing and maintaining the security of any personal data collected as part of the project. Please provide details of those who will have access to the data.

The interview will be audio recorded. The file and the transcription will be stored securely in two places; my personal computer and my Google drive as a back up. Both spaces have a strong password- protection.

Data Sharing

8. Do you intend to share or archive data generated from this project?

No

If Yes,

Please describe briefly and continue to question 9. (*Relevant considerations include funder, publisher, or other requirements for shared data. If you have completed a data management plan, the section on sharing/archiving may be copied here.*);



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9. Please indicate the means by which you intend to share/archive your data:

Openly available from a data repository (e.g. UK Data Archive, University of Essex Research Data Repository, other repository)	
Available via a data repository but with controlled access (Examples of access controls include registration with the repository, requesting permission from the depositor, and data access committees.)	
Other (Please provide details)	

10. If you answered 'no' to question 8 above, please provide specific reasons why the data will not be made available (e.g. participants have not consented, sensitivity of the data, intellectual property restrictions, etc.)

The data is not involved in any personal details. However, the data will not be shared because it is about to protect of interviewees who could be identifiable from their institutional roles.

It is a requirement of the Data Protection Act 1998 to ensure individuals are aware of how information about them will be managed. Please tick the box to confirm that participants will be informed of the data access, storage and security arrangements described above. If relevant, it is appropriate for this to be done via the participant information sheet

Further guidance about the collection of personal data for research purposes and compliance with the Data Protection Act can be accessed at the following weblink. Please tick the box to confirm that you have read this guidance

(http://www.essex.ac.uk/records_management/policies/data_protection_and_research.aspx)



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Risk and Risk Management²

11. Are there any potential risks (e.g. physical, psychological, social, legal or economic) to participants or subjects associated with the proposed research?

No

If Yes,

Please provide full details of the potential risks and explain what risk management procedures will be put in place to minimise the risks:

12. Are there any potential risks to researchers as a consequence of undertaking this proposal that are greater than those encountered in normal day-to-day life?

No

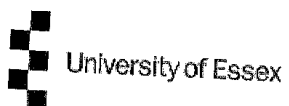
If Yes,

Please provide full details and explain what risk management procedures will be put in place to minimise the risks:

13. Will the research involve individuals below the age of 18 or individuals of 18 years and over with a limited capacity to give informed consent?

No

² Advice on risk assessment is available from the University's Health and Safety Advisers (email safety@essex.ac.uk; tel 2944) and on the University's website at www.essex.ac.uk/health-safety/risk/default.aspx.



If Yes, a Disclosure and Barring Service disclosure (DBS check) may be required.³

14. Are there any other ethical issues that have not been addressed which you would wish to bring to the attention of the Faculty Ethics Sub-Committee and/or University Ethics Committee.

No

³ Advice on the Disclosure and Barring Service and requirement for checks is available: (1) for staff from Employment Compliance Manager in Human Resources (email lauren@essex.ac.uk; tel 3508) and on the University's website at <http://www.essex.ac.uk/hr/policies/docs/CRBdocumentpolicy.pdf>; (2) for students from the University's Academic Section.

เอกสารรายละเอียดของการศึกษารวิจัย
Research Information Sheet

[ชื่อ-สกุล ผู้วิจัย] Researcher's name	ปัญญา ปิติไกรสร, นักศึกษาปริญญาเอก Punjapha Pitigraisorn, PhD Candidate
สถาบัน [Affiliation]	Faculty of Sociology, University of Essex
หัวข้อวิจัย [Title of the study]	Misinformation on food, Science and Risk communication on Social media and Trust
ที่ปรึกษา [Supervisors]	Prof. Nick Allum

เรียน ผู้เข้าร่วมวิจัย
Dear Participants,

ดิฉันขอเรียนเชิญท่านเข้าร่วมงานวิจัยชิ้นนี้ซึ่งสนใจสถานการณ์ข่าวลวงทางอาหารที่ปรากฏอยู่ในสื่อโซ
เชียลมีเดียในประเทศไทย อันก่อให้เกิดพฤติกรรมบริโภคที่ไม่ถูกต้องได้ ซึ่งส่งผลให้เกิดพฤติกรรมบริโภคที่ไม่ถูกต้องได้
การแก้ไขสถานการณ์นี้จึงจำเป็นต้องอาศัยความเข้าใจในประเด็นเรื่องอาหาร วัฒนธรรมความเชื่อ
และการสื่อสารวิทยาศาสตร์และความเสี่ยง

I would like to invite you to participate in this project, which is concerned with
misinformation about food on the social media which causes misunderstanding about food and
leads to changes in food perception. To deal with this circumstances, it requires an understanding
in the issues of food, culture and beliefs as well as science communication and risk
communication.

โครงการวิจัยเรื่องนี้ เป็นงานวิจัยปริญญาเอกของผู้วิจัยซึ่งกำลังศึกษาอยู่ที่มหาวิทยาลัยเอสเส็ก
ประเทศอังกฤษ
งานวิจัยชิ้นนี้ได้รับการตรวจสอบและรับรองโดยคณะกรรมการที่ปรึกษาทางจริยธรรมทางการวิจัยของคณะผู้วิจัย
ผู้วิจัยหวังว่างานวิจัยชิ้นนี้จะเป็นส่วนหนึ่งในการพัฒนาองค์ความรู้เกี่ยวกับการรับรู้ความเสี่ยงทางอาหาร
การบริโภคข้อมูลทางโซเชียลมีเดีย
The research project is the researcher's PhD thesis for my degree course at the University
of Essex, United Kingdom. It has been reviewed and approved by the Ethics Committee, University
of Essex. It is hoped that the project could help develop body of knowledge about food risk and the
consumption on social media information.

ในกรณีที่ท่านเข้าร่วมงานวิจัย ผู้วิจัยจะขออนุญาตนัดท่านเพื่อทำการสัมภาษณ์เก็บข้อมูล เวลา
และสถานที่ในการสัมภาษณ์เป็นไปตามความสะดวกของท่านในฐานะผู้ให้สัมภาษณ์
การสัมภาษณ์จำนวนหนึ่งครั้ง (อาจมีการสอบถามข้อมูลเพิ่มเติม)
จะดำเนินการโดยตัวผู้วิจัยพร้อมกับการบันทึกด้วยลายมือและบันทึกเสียงสด
การสัมภาษณ์จะใช้เวลาประมาณ 30-40 นาที เมื่องานวิจัยเสร็จสมบูรณ์
ผู้วิจัยจะสรุปผลการดำเนินงานให้ท่านทราบและจะมีการจัดทำสรุปผลตีพิมพ์ให้สำหรับที่แจ้งความประสงค์

If you agree to participate in the project, the researcher will do as follow: the researcher will
arrange a time and place to meet, which are convenient for you, for interview; there will be one,

single interview with the researcher asking you the questions. The interview will be audio recorded and notes will be written during the interview. The interview is expected to last no longer than forty minutes (further brief discussion might be added as necessary); when the researcher has completed the study, the researcher will produce a summary of the findings and send it to you. The full-text thesis will be provided as requested.

ชื่อและข้อมูลส่วนตัวของท่านจะไม่ถูกบันทึกในชุดคำถามและไม่เปิดเผยต่อผู้อื่นนอกจากผู้วิจัยทุกคำตอบของ
ท่านจะใช้ในการวิจัยนี้เท่านั้นและข้อมูลของท่านจะถูกเก็บเป็นความลับไม่เปิดเผยต่อสาธารณะการศึกษาวินิจฉัยนี้
จะไม่ส่งผลกระทบต่อท่านแต่อย่างใด

If you agree to take part, your name will not be recorded on the interviews and the information will not be disclosed to other parties. Your responses to the questions will be used for the purpose of this project only. Your responses and date will be confidential. You can be assured that if you take part in the project you will remain anonymous. Please be assured that this project can do no harm for you.

การเข้าร่วมของท่านในงานวิจัยนี้เป็นไปด้วยความสมัครใจ ท่านไม่ได้ถูกบังคับให้เข้าร่วม
และท่านได้รับการติดต่อขอสัมภาษณ์ในฐานะที่ท่านทำงานเกี่ยวข้องกับประเด็นเรื่องอาหาร การสื่อสาร
และการคุ้มครองผู้บริโภค ถ้าท่านไม่ประสงค์จะเข้าร่วม ท่านไม่จำเป็นต้องแจ้งเหตุผลใดๆ
และผู้วิจัยจะไม่ติดต่อท่านไปอีกครั้ง หากท่านเข้าร่วม ท่านอาจรู้สึกอึดอัดหรือรู้สึกไม่สบายใจในบางคำถาม
ท่านมีสิทธิ์ที่จะไม่ตอบ และท่านมีสิทธิ์ที่จะถอนตัวจากงานวิจัยเมื่อใดก็ได้
การไม่เข้าร่วมวิจัยหรือถอนตัวออกจากโครงการนี้จะไม่ผลกระทบใดๆ ต่อตัวท่านแต่อย่างใด

Your participation in this project is entirely voluntary. You are not obliged to take part. You have been approached as a worker in the field of food-consumer protection, experts, online social influencers with a view that you might be interested in taking part; this does not mean you have to. If you do not wish to take part you do not have to give a reason and you will not be contacted again. Similarly, if you do agree to participate, you have the right to decline to answer any question with which you feel uncomfortable. You are free to withdraw and discontinue at any time during the project. Your withdrawal will not affect you at all.

หนังสือรับรองเจตนายินยอมที่จะเข้าร่วมงานวิจัยโดยการสัมภาษณ์

Interview Informed Consent Form

[ชื่อ-สกุล ผู้วิจัย]	ปัญญา ปิติไกรศร, นักศึกษาปริญญาเอก
Researcher's name	Punjapha Pitigraisorn, PhD Candidate
สถาบัน [Affiliation]	Faculty of Sociology, University of Essex
หัวข้อวิจัย [Title of the study]	Misinformation on food, Science and Risk communication on Social media and Trust
ที่ปรึกษา [Supervisors]	Prof. Nick Allum

โปรดอ่านข้อความด้านล่างอย่างละเอียดในกรณีที่ท่านเห็นชอบกรวดลงนามแสดงเจตนายินยอมเพื่อเข้าร่วมงานวิจัยโดยการสัมภาษณ์

Please read the following statements and, if you agree, please sign your name to confirm agreement:

ข้าพเจ้าขอรับรองว่าข้าพเจ้าได้อ่านหรือมีผู้อ่านให้ข้าพเจ้าฟังและทำความเข้าใจเอกสารข้อมูลคำอธิบายสำหรับผู้เข้าร่วมเป็นผู้ให้การสัมภาษณ์ในการวิจัยข้างต้น ข้าพเจ้าได้มีโอกาสในการพิจารณาถึงข้อมูลเหล่านั้น ชักถามข้อสงสัย และได้รับคำตอบที่น่าพอใจจากผู้วิจัย

I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

ข้าพเจ้าเข้าใจว่าการมีส่วนร่วมของข้าพเจ้าเป็นไปด้วยความสมัครใจ และข้าพเจ้าสามารถถอนตัวหรืองดการเข้าร่วมงานวิจัยขณะใดก็ได้โดยไม่มีต้องให้เหตุผล

I understand that my participation is voluntary and that I am free to withdraw and discontinue participation at any time without giving any reason.

ข้าพเจ้าเข้าใจว่าข้อมูลของข้าพเจ้าจะถูกเก็บเป็นความลับและผลงานตีพิมพ์ใดๆ

อันเนื่องมาจากงานชิ้นนี้จะนำเสนอเพียงแต่ข้อมูลเท่านั้นซึ่งข้อมูลนี้ไม่นำมาสู่การระบุตัวตนของข้าพเจ้า

I understand that my data will be treated confidentially and any publication resulting from this work will report only data that does not identify me.

ข้าพเจ้ายินดีที่จะเข้าร่วมเป็นส่วนหนึ่งของการศึกษานี้

I freely agree to participate in this study.

ลงนาม (Signatures)

ชื่อผู้ยินยอมเข้าร่วมวิจัย _____

Name of participant (block capitals) _____

วันที่ (Date) _____

ลายเซ็น Signature _____

ชื่อผู้วิจัย (ชื่อเต็ม) _____

Researcher's name (block capitals) _____

วันที่ (Date) _____

ลายเซ็น (Signature) _____

รหัสผู้ให้สัมภาษณ์ (Interviewee Code) _____

สำหรับผู้ที่ไม่สามารถอ่านออกเขียนได้ หรือไม่สามารถตัดสินใจได้ด้วยตนเอง จะต้องมียานลงนามรับรอง
ถ้าเป็นไปได้

For those who are illiterate, a witness chosen by the interviewee can sign the agreement on behalf
of the interviewee and initial the corresponding box to confirm agreement.

ข้าพเจ้าคือพยานที่ผู้ให้สัมภาษณ์คัดเลือก และข้าพเจ้าเข้าใจในข้อตกลงของการวิจัยทั้งหมด

I am the interviewee's chosen witness. I understand the details of the agreement.

ชื่อพยาน (ชื่อเต็ม)

Interviewee's witness (block capitals)

วันที่ (Date) _____

ลายเซ็น (Signature) _____

สำเนา : (1) สำหรับผู้เข้าร่วม (2) สำหรับผู้วิจัย

Copy: (1) for participant (2) for researcher

Appendix C

Socioeconomic Questions

FREQUENCIES VARIABLES=Q15Sex Q17Education Q18Howlong_socialmedia Q19
Q16Age_Recode

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Wish Rumour Syntax

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/MISSING=ANALYSIS

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combine4567_7 combine4567_8
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/MISSING=ANALYSIS

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combine4567_5 combine4567_6
combine4567_7 combine4567_8
/CRITERIA=CI(.95).

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combine4567_6

combine4567_7 combine4567_8 BY Random_groupof_4

/STATISTICS DESCRIPTIVES

/PLOT MEANS

/MISSING ANALYSIS

/POSTHOC=SCHEFFE LSD ALPHA(0.05).

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Q4_6Well_understand_cancer_influencer + Q4_7Give_truthinformation_influencer +
Q4_8Agree_influencer).

EXECUTE.

COMPUTE Sumof_trustscore_Group2=(Q5_1Trust_govscience + Q5_2Wanttoshare_govscience +
Q5_3Credible_govscience + Q5_4Reasonable_govscience + Q5_5Support_mybelief_govscience
+
Q5_6Well_understand_cancer_govscience + Q5_7Give_truthinformation_govscience +
Q5_8Agree_govscience).

EXECUTE.

COMPUTE Sumof_trustscore_Group3_swap=(Q6_1Trust_govscience_swap +
Q6_2Wanttoshare_govscience_swap +

```

Q6_3Credible_govscience_swap + Q6_4Reasonable_govscience_swap +
Q6_5Support_mybelief_govscience_swap + Q6_6Well_understand_cancer_gov_swap +
Q6_7Give_truthinformation_govscience_swap + Q6_8Agree_govscience_swap).
EXECUTE.

COMPUTE Sumof_trustscore_Group4_swap=(Q7_1Trust_influencer_swap +
Q7_2Wanttoshare_influencer_swap +
  Q7_3Credible_influencer_swap + Q7_4Resonable_influencer_swap +
Q7_5Support_mybelief_influencer_swap
  + Q7_6Well_understand_cancer_influencer_swap +
Q7_7Give_truthinformation_influencer_swap +
  Q7_8Agree_influencer_swap).
EXECUTE.

RECODE Random_groupof_4 (2=1) (3=1) (1=0) (4=0) INTO Any_message_speak_byGOVonly.
EXECUTE.

RECODE Random_groupof_4 (2=1) (4=1) (1=0) (3=0) INTO True_message_created_byGOV.
EXECUTE.

RECODE Q1_Knowing_soursop (1=1) (3=1) (2=2) INTO Knowing_soursop_before.
EXECUTE.

RECODE Q17Education (Lowest thru 4=1) (5 thru 6=2) INTO Education_Recode.
EXECUTE.

RECODE Q18Howlong_socialmedia (4 thru Highest=4) (ELSE=Copy) INTO Spendtime_Facebook.
EXECUTE.

REGRESSION
  /DESCRIPTIVES MEAN STDDEV CORR SIG N
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS R ANOVA CHANGE
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT SumofQ4567
  /METHOD=ENTER Q15Sex Q16Age Education_Recode Spendtime_Facebook
  Knowing_soursop_before
  Any_message_speak_byGOVonly True_message_created_byGOV
  /SCATTERPLOT=(*ZRESID,*ZPRED)
  /RESIDUALS NORMPROB(ZRESID).

DATASET ACTIVATE DataSet1.
ONEWAY Q3_1Trust_alternativemed Q3_2Wanttoshare_alternativemed
Q3_3Credible_alternativemed
  Q3_4Reasonable_alternativemed Q3_5Support_mybelief_alternativemed BY
Q1_Knowing_soursop

```



```

/STATISTICS DESCRIPTIVES
/PLOT MEANS
/MISSING ANALYSIS
/POSTHOC=SCHEFFE LSD ALPHA(0.05).

```

```

ONEWAY Q3_1Trust_alternativemed Q3_2Wanttoshare_alternativemed
Q3_3Credible_alternativemed
  Q3_4Reasonable_alternativemed Q3_5Support_mybelief_alternativemed BY
Q2_Think_aboutsoursop
/STATISTICS DESCRIPTIVES
/PLOT MEANS
/MISSING ANALYSIS
/POSTHOC=SCHEFFE LSD ALPHA(0.05).

```

```

DATASET ACTIVATE DataSet1.
ONEWAY Q3_1Trust_alternativemed Q3_2Wanttoshare_alternativemed
Q3_3Credible_alternativemed
  Q3_4Reasonable_alternativemed Q3_5Support_mybelief_alternativemed BY
Q1_Knowing_soursop
/PLOT MEANS
/MISSING ANALYSIS
/POSTHOC=SCHEFFE ALPHA(0.05).

```

```

FREQUENCIES VARIABLES=Q1_Knowing_soursop Q2_Think_aboutsoursop
/HISTOGRAM
/ORDER=ANALYSIS.

```

```

FREQUENCIES VARIABLES=Q1_Knowing_soursop Q2_Think_aboutsoursop
/PIECHART FREQ
/ORDER=ANALYSIS.

```

```

DATASET ACTIVATE DataSet1.
FREQUENCIES VARIABLES=Q1_Knowing_soursop Q2_Think_aboutsoursop
/PIECHART PERCENT
/ORDER=ANALYSIS.

```

```

DATASET ACTIVATE DataSet1.
COMPUTE SumofQ3=(Q3_1Trust_alternativemed + Q3_2Wanttoshare_alternativemed +
  Q3_3Credible_alternativemed + Q3_4Reasonable_alternativemed +
Q3_5Support_mybelief_alternativemed).
EXECUTE.

```

```

ONEWAY SumofQ3 BY Q1_Knowing_soursop
/PLOT MEANS
/MISSING ANALYSIS.

```

```

ONEWAY SumofQ3 BY Q1_Knowing_soursop

```

```
/STATISTICS DESCRIPTIVES
/MISSING ANALYSIS.
```

Dread Rumour Syntax

```
DATASET ACTIVATE DataSet1.
RECODE Random_Group (1=1) (4=1) (2=2) (3=2) INTO Group_by_same_communicators.
VARIABLE LABELS Group_by_same_communicators 'Same Communicators Different Messages'.
EXECUTE.
```

```
RECODE Random_Group (1=1) (3=1) (2=2) (4=2) INTO Group_by_same_message.
VARIABLE LABELS Group_by_same_message 'Same Message Different Communicators'.
EXECUTE.
```

```
T-TEST GROUPS=Group_by_same_message(1 2)
/MISSING=ANALYSIS
/VARIABLES=combine_11121314_1 combine_11121314_2 combine_11121314_3
combine_11121314_4
combine_11121314_5 combine_11121314_6 combine_11121314_7 combine_11121314_8
/CRITERIA=CI(.95).
```

```
T-TEST GROUPS=Group_by_same_communicators(1 2)
/MISSING=ANALYSIS
/VARIABLES=combine_11121314_1 combine_11121314_2 combine_11121314_3
combine_11121314_4
combine_11121314_5 combine_11121314_6 combine_11121314_7 combine_11121314_8
/CRITERIA=CI(.95).
```

```
ONEWAY combine_11121314_1 combine_11121314_2 combine_11121314_3
combine_11121314_4
combine_11121314_5 combine_11121314_6 combine_11121314_7 combine_11121314_8 BY
Random_Group
/STATISTICS DESCRIPTIVES
/PLOT MEANS
/MISSING ANALYSIS
/POSTHOC=SCHEFFE LSD ALPHA(0.05).
```

```
RECODE Random_Group (2=1) (3=1) (1=0) (4=0) INTO Any_message_spoken_byGov.
EXECUTE.
```

```
RECODE Random_Group (2=1) (4=1) (1=0) (3=0) INTO True_message_created_byGOV.
EXECUTE.
```

```
COMPUTE SumofQ11=(Q11_1Trust_influencer + Q11_2Wanttoshare_influencer +
Q11_3Credible_influencer +
Q11_4Resonable_influencer + Q11_5Support_mybelief_influencer +
```

```

Q11_6Well_understand_fakefood_influencer + Q11_7Give_truthinformation_influencer +
Q11_8Agree_influencer).
EXECUTE.

```

```

COMPUTE SumofQ12=(Q12_1Trust_MinistryHealth + Q12_2Wanttoshare_MinistryHealth +
Q12_3Credible_MinistryHealth + Q12_4Resonable_MinistryHealth +
Q12_5Support_mybelief_MinistryHealth
+ Q12_6Well_understand_fakefood_MinistryHealth +
Q12_7Give_truthinformation_MinistryHealth +
Q12_8Agree_influencer_MinistryHealth).
EXECUTE.

```

```

COMPUTE SumofQ13=(Q13_1Trust_MinistryHealth_swap +
Q13_2Wanttoshare_MinistryHealth_swap +
Q13_3Credible_MinistryHealth_swap + Q13_4Resonable_MinistryHealth_swap +
Q13_5Support_mybelief_MinistryHealth_swap +
Q13_6Well_understand_fakefood_MinistryHealth_swap +
Q13_7Give_truthinformation_MinistryHealth_swap +
Q13_8Agree_influencer_MinistryHealth_swap).
EXECUTE.

```

```

COMPUTE SumofQ14=(Q14_1Trust_influencer_swap + Q14_2Wanttoshare_influencer_swap +
Q14_3Credible_influencer_swap + Q14_4Resonable_influencer_swap +
Q14_5Support_mybelief_influencer_swap + Q14_6Well_understand_fakefood_influencer_swap
+
Q14_7Give_truthinformation_influencer_swap + Q14_8Agree_influencer_swap).
EXECUTE.

```

```

RECODE Q8_Knowing_fakeeggs (3=1) (ELSE=Copy) INTO Knowing_fakeeggs.
EXECUTE.

```

```

REGRESSION
/MISSING LISTWISE
/STATISTICS COEFF OUTS R ANOVA
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT Sumof11_12_13_14
/METHOD=ENTER Q15Sex Q16Age Q17Education_Recode Q18Spendtime_Recode
Knowing_fakeeggs
Any_message_spoken_byGov True_message_created_byGOV
/SCATTERPLOT=(*ZRESID,*ZPRED)
/RESIDUALS HISTOGRAM(ZRESID) NORMPROB(ZRESID).

```

```

ONEWAY Q10_1Trust_NationTV Q10_2Wanttoshare_NationTV Q10_3Credible_NationTV
Q10_4Reasonable_NationTV Q10_5Support_mybelief_NationTV BY Q8_Knowing_fakeeggs
/STATISTICS DESCRIPTIVES
/PLOT MEANS

```

```
/MISSING ANALYSIS  
/POSTHOC=SCHEFFE LSD ALPHA(0.05).
```

```
T-TEST GROUPS=Knowing_fakeeggs(1 2)  
/MISSING=ANALYSIS  
/VARIABLES=Q10_1Trust_NationTV Q10_2Wanttoshare_NationTV Q10_3Credible_NationTV  
Q10_4Reasonable_NationTV Q10_5Support_mybelief_NationTV  
/CRITERIA=CI(.95).
```

```
ONEWAY Q10_1Trust_NationTV Q10_2Wanttoshare_NationTV Q10_3Credible_NationTV  
Q10_4Reasonable_NationTV Q10_5Support_mybelief_NationTV BY Q8_Knowing_fakeeggs  
/STATISTICS DESCRIPTIVES  
/PLOT MEANS  
/MISSING ANALYSIS  
/POSTHOC=SCHEFFE LSD ALPHA(0.05).
```

```
ONEWAY Q10_1Trust_NationTV Q10_2Wanttoshare_NationTV Q10_3Credible_NationTV  
Q10_4Reasonable_NationTV Q10_5Support_mybelief_NationTV BY Q9_Think_fakeeggs  
/STATISTICS DESCRIPTIVES  
/PLOT MEANS  
/MISSING ANALYSIS  
/POSTHOC=SCHEFFE LSD ALPHA(0.05).
```

```
DATASET ACTIVATE DataSet1.  
FREQUENCIES VARIABLES=Q8_Knowing_fakeeggs Q9_Think_fakeeggs  
/PIECHART FREQ  
/ORDER=ANALYSIS.
```

```
DATASET ACTIVATE DataSet1.  
FREQUENCIES VARIABLES=Q8_Knowing_fakeeggs Q9_Think_fakeeggs  
/PIECHART PERCENT  
/ORDER=ANALYSIS.
```

```
ONEWAY Sumof11_12_13_14 BY Random_Group  
/STATISTICS DESCRIPTIVES  
/PLOT MEANS  
/MISSING ANALYSIS.
```