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### **Need for Affect and Attitudes toward Drugs: The Mediating Role of Values**

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## **Abstract**

Human values and affective traits were found to predict attitudes toward the use of different types of drugs (e.g., alcohol, marijuana, and other illegal drugs). In this study ( $N = 196$ ,  $M_{\text{age}} = 23.09$ ), we aimed to gain a more comprehensive understanding of those predictors of attitudes toward drug use in a mediated structural equation model, providing a better overview of a possible motivational path that drives to such a risky behavior. Specifically, we predicted and found that the relations between need for affect and attitudes toward drug use were mediated by excitement values. Also, results showed that excitement values and need for affect positively predicted attitudes toward the use of drugs, whereas normative values predicted it negatively. The pattern of results remained the same when we investigated attitudes toward alcohol, marijuana, or illegal drugs separately. Overall, the findings indicate that emotions operate via excitement and normative values to influence risk behaviour.

**Keywords:** Need for affect; emotions; human values; attitudes; drugs; alcohol.

## **Need for Affect and Attitudes toward Drugs: The Mediating Role of Values**

There is a large debate regarding the use of drugs such as alcohol or marijuana nowadays. Many are worried that the abusive use of drugs can "destroy the society", because it is associated with problems such as poverty and deprivation, family breakdown, homelessness, crime, and others, besides the high cost to the government (Bennett, 2013). Others, such as the British Liberal Democratic party, suggested legalising drugs such as marijuana because large profits could be made with the legal trade of the drug (£750m to £1bn) and because marijuana can help to ease chronic pain and anxiety (Cambridge, Fruen, & Lake, 2017). Also, prohibiting marijuana and other drugs has not stopped people from using and abusing them. Indeed, the World Drug Report estimates that 1 in 20 adults – or 250 million individuals – between the ages of 15 and 64 used at least one drug in 2014, with cannabis and alcohol being the most commonly used drugs (United Nations Office on Drugs and Crime, 2016). Also, people above 15 years drank on average 6.2 litres of pure alcohol in 2013 (World Health Organization, 2014).

Given the consequences of drug abuse (alcohol and marijuana), and the fact that their consumption is high regardless these substances are prohibited or not, it is important to find a possible motivational path that drives such risky behaviour. The present study aims to help address this issue by investigating the roles of need for affect and human values in predicting attitudes toward the consumption of drugs.

### **Need for Affect**

One important construct that can help us to understand attitudes toward drug use is the need for affect. The conceptualization of the construct pass through two basic characteristics (Maio & Esses, 2001): (1) individuals differ in the way they pursue affective experiences, varying in points as intensity, quality, and stability, and (2)

emotions can be responded in the two positive or negative ways. Based on these characteristics, the construct was defined as the tendency for an individual to approach or avoid emotion-inducing situations and activities. The Need for Affect Scale is composed by two factors: emotion approach, and emotion avoidance (Appel, Gnambs, & Maio, 2012; Maio & Esses, 2001).

Because drugs can elicit emotions, we assume that the tendency to approach emotions should be positively correlated with drug use. Nonetheless, we are not aware of any research investigating the relations between need for affect and drug use. Consistent with this idea, studies have found significant correlations between related constructs of need for affect and drug use. For example, high intensity seeking is positively related to alcohol use (Comeau, Stewart, & Loba, 2001). Sensation seeking and risk-taking were also positively associated with alcohol use (MacPherson, Magidson, Reynolds, Kahler, & Lejuez, 2010), and cigarette consumption among students (Leeman, Hoff, Krishnan-Sarin, Patock-Peckham, & Potenza, 2014). Our study extends previous findings addressing the relation between need for affect and drugs use and also contributes with the literature about human values by showing its mediating mechanisms.

### **Human values**

Human values are another important construct to help understanding the attitudes toward drugs, especially due its important influence in shaping individuals' attitudes and behaviors (Maio, 2016; Schwartz, 2012). Values have two main functions: they (1) guide human behaviour and (2) cognitively represent human needs (Gouveia, Milfont, & Guerra, 2014a). Values have been extensively researched in the past three decades, with different studies showing how they predict a wide range of outcomes, such as pro-environmental behavior (Evans et al., 2013) and well-being (Kasser &

Ahuvia, 2002), and a range of attitudes, such as environmental attitudes (Milfont & Gouveia, 2006), attitudes toward genetically modified\organically grown food (Dreezens, Martijn, Tenbült, Kok, & de Vries, 2005; Honkanen & Verplanken, 2004), and attitudes toward recycling (Barr, Ford, & Gilg, 2003).

However, despite the important role of human values to drive attitudes, few researchers have investigated their influence on attitudes toward drug consumption. To the best of our knowledge, the only available evidence indicates that the use of substances was higher among individuals in India who prioritize aesthetic values and lower among Indians who prioritize religious values (Singh, Broota, & Singh, 1983). Since this research, new validated models of values have been tested in nations around the world, enabling a wider and more penetrating look of their relations with other variables, such as the use of drugs. The most influential value theory was proposed by Schwartz's (1992), who postulated and found that values can be ordered along their underlying motives in a quasi-circumplex model with 10 value types. More recently, Gouveia (2013) proposed *The Functional Theory of Human Values*, which is functional driven and parsimonious, as it relies only on six value types (also called subfunctions; see also Gouveia et al., 2014). Although there are some differences between Schwartz's and Gouveia's models, both value theorists agree that the content of the values share large similarities (Gouveia et al., 2014b; Schwartz, 2014). In this research we used the Functional Theory because of its parsimoniousness.<sup>1</sup>

*The Functional Theory* assumes that values can be ordered along two dimensions: goals and needs. The first dimension outlines personal, central, and social goals. The second dimension distinguishes between survival and thriving needs. Taken

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<sup>1</sup> We suspect that we would have obtained the same results using Schwartz's (1992) value model because of the overlap in content between the two models.

together, this model presents six subfunctions in a 3x2 structure (Table 1; Gouveia et al., 2014a; Maslow, 1954; Ronen, 1994): (1) *excitement*, representing the physiological need for variety and pleasure; (2) *promotion*, typical in individuals that have a materialistic orientation and cherish their own personal benefits; (3) *suprapersonal*, representing the need of aesthetics, cognition, and self-actualization; (4) *existence*, representing the basic conditions for individual's biological and physiological survival; (5) *interactive*, with values that are essential in regulating, establishing, and maintaining interpersonal relationships; and (6) *normative*, representing survival needs through social goals of security and control.

**[TABLE 1 AROUND HERE]**

Two of these value subfunctions, excitement and normative, are particularly relevant to our research because of their potential conceptual links to drug use (see below). Excitement values describe individuals who are hedonistic and sensation seekers, and are often high in individuals who pursue pleasure (e.g., hedonism) and who tend not to be orientated toward material goals in the long run (Gouveia et al., 2014a; Maslow, 1954). Normative values reflect materialistic needs and emphasize social rules, the importance of preserving one's culture, and conventional norms (Gouveia et al., 2014a). Previous research has found that excitement values were positively and normative values were negatively related to attitudes toward alcohol (Medeiros, Pimentel, Monteiro, Gouveia, & Medeiros, 2015) and marijuana consumption (Pimentel, Gouveia, Medeiros, Santos, & Fonseca, 2011). Also, attitudes toward the non-use of drugs was negatively related to excitement and positively related to normative values (Gouveia, Santos, Pimentel, & Gouveia, 2011).

A similar study, which used Schwartz's (2006) cultural value orientations as a theoretical framework, has looked into the correlates of values with actual alcohol

consumption (Inman, da Silva, Bayoumi, & Hanel, 2017). Inman et al. found that embeddedness values, which are similar to normative values in the Functional Theory, correlated negatively with alcohol consumption across 79 countries, whereas affective and intellectual autonomy correlated positively (affective autonomy values are closely related to excitement values of the Functional Theory). The results were robust even after controlling for income and education. Thus, the pattern of results is similar for attitudes toward alcohol consumptions on an individual level and actual alcohol consumption on a country level.

Finally, the relations between need for affect and human values is not well documented. However, as research has found that high endorsement of excitement values is linked to a higher approach of emotions (Coelho, Maio, Gouveia, Wolf, & Monteiro, 2017), it can be assumed that endorsing excitement values can fulfil the need to approach in situations that can bring strong emotions. In the same study, the emotion approach was also correlated to other subfunctions, as normative and interactive values. However, no significant correlation was found with emotion avoidance.

### **The Present Research**

As shown above, attitudes toward drug consumption are predicted by excitement and normative values (Gouveia et al., 2011; Medeiros et al., 2015; Pimentel et al., 2011), and by emotion-relevant traits (Comeau et al., 2001; Leeman et al., 2014; MacPherson et al., 2010). In the present research, we tested the mediating role of normative and excitement values in the relation between the approach and avoidance of emotions and attitudes toward the use of alcohol, illegal drugs, and marijuana. This mechanism is based on the reasoning of several value theorists who have argued that needs drive values, which in turn influence attitudes (Gouveia et al., 2014a; Maio &

Olson, 1994; Schwartz, 1992). As shown before, values have a crucial role in attitudes and behavior.

## Method

*Participants and Procedure.* Participants were 121 women and 75 men ( $N_{total} = 196$ ), with a mean age of 23.09 years ( $SD = 5.18$ ). They answered an online questionnaire made available through social media (e.g., Facebook). The online questionnaire provided information about the aims of the study, its ethical considerations, and contact details of the researchers. On average, ten minutes were enough to complete all the instruments.

### *Instruments.*

*Basic Values Survey* (Gouveia, Milfont, Fischer, & Santos, 2008). This survey consists of 18 items and measures value priorities. Participants indicated the degree of importance (1 = *Totally not important*; 7 = *Extremely important*) of each of the 18 items to them as a guiding principle in their lives. Example items include “*Pleasure. To live for the moment; to satisfy all your desires.*” (excitement value) and “*Obedience. To fulfill your daily duties and obligations; to respect your parents, superiors or elders.*” (normative value). Due the purpose of this study, we focus on excitement values (*emotion, pleasure, sexuality*) and normative values (*obedience, religiosity, tradition*). These subfunctions presented satisfactory reliability (excitement, Cronbach’s alpha,  $\alpha = .61$ ; normative,  $\alpha = .67$ ; Kline, 2013)

*Need for Affect.* To measure need for affect, we used the Brazilian version (Coelho et al., 2017) of the *Need for Affect Questionnaire - Short Version* (Appel et al., 2012). This measure is composed of 10 items, with 5 assessing emotion approach and 5 assessing emotion avoidance. Participants indicated the degree of agreement (-3 = *Strongly disagree*; 3 = *Strongly agree*) with items such “*I feel that I need to experience*



*strong emotions regularly*” (Approach,  $\alpha = .72$ ), and “*Emotions are dangerous—they tend to get me into situations that I would rather avoid*” (Avoidance,  $\alpha = .77$ ).

*Attitudes toward drug consumption.* Attitudes toward alcohol use, drug use, and marijuana use were assessed with the *Attitudes Toward Alcohol Use Scale* ( $\alpha = .95$ ; Gouveia, Pimentel, Leite, Albuquerque, & Costa, 2009), *Attitudes Toward Drugs Use Scale* ( $\alpha = .97$ ; Gouveia, Pimentel, Medeiros, Gouveia, & Palmeira, 2007), and *Attitudes Toward Use of Marijuana Scale* ( $\alpha = .96$ ; Gouveia, Queiroga, Meira, Pimentel, & Jesus, 2005). Each of these instruments is composed of four items, evaluating the participants’ consideration of being under the use of the respective substances. Participants answer the measures using a 9-point semantic differential scale (+4 to -4), with the following adjectives in each end: *positive/negative*, *pleasant/unpleasant*, *good/bad*, and *desirable/undesirable*. It is important to highlight that, in despite of the similarities between the Drugs and Marijuana measures, which could lead for a redundancy, and the significant correlation between the measures ( $r = .79$ ,  $p < .01$ ), we are confident that their separate use is relevant to our study. Also, both correlated differently with the considered values (See results below).

*Data analysis.* Descriptive statistics and multiple regressions were performed in SPSS, while an explicative model with mediation tests was designed and tested in Mplus. For testing model fit, we considered the robust maximum likelihood estimator and the following indices (Hair, Black, Babin, & Anderson, 2015; Tabachnick & Fidell, 2013): Comparative Fit Index (CFI), with recommended values above .90; Root-Mean Square Error of Approximation (RMSEA), with recommended values below .09; and Standardized Root Mean Square Residual (SRMR), with recommended values below .07. For the indirect effects, we used the maximum likelihood estimator and 5000 bootstrap simulations. The indirect effect is considered significant when the range

covered by the confidence interval does not include zero (Hayes, Preacher, & Myers, 2011).

## **Results**

### *Correlations and multiple regressions.*

First, we examined the correlations between excitement values, normative values, emotion approach, and emotion avoidance to the attitudes toward alcohol, marijuana, drugs, and their overall (see Table 2). After, a multiple regression was performed, to examine the effects of the values and the emotion variables on the attitudes. Results indicated that the two values dimensions and emotion approach predicted the three types of attitudes, whereas avoidance of emotions did not (see Table 2). Thus, following these results, this last variable was not considered for the structural equation model (see Figure 1). Emotion approach was also correlated with both normative ( $r = .08, p > .05$ ) and excitement values ( $r = .29, p < .01$ ), to check for any possible redundancy.

**[TABLE 2 AROUND HERE]**

### *Mediational Model*

To test whether excitement and normative values mediate the effects of emotion approach on attitudes toward drug use, the structural equation model displayed in Figure 1 used emotion approach as independent variable, values as mediators (excitement and normative), and attitudes toward the substances as dependent variables (alcohol, marijuana and drugs). Results indicated a good model fit [CFI = .90; RMSEA = .07 (IC90% = .06, .08); SRMR = .07]. Although we believe that there are good theoretical reasons to include values as mediators and not approach of emotions, we also tested alternative mediation models with emotion approach as a mediator and values as

predictors. However, these models showed a worse fit [CFI = .87; RMSEA = .08 (IC90% = .07, .09); SRMR = .12].

### **[FIGURE 1 AROUND HERE]**

Next, we tested the indirect effects of excitement values on the relation between emotion approach and attitudes toward alcohol, marijuana, and drugs. We did not include normative values in the examination of mediating mechanisms because this dimension presented no significant relation with emotion approach. Results showed significant positive indirect effects of excitement values on the relation between approach of emotions and attitudes toward alcohol ( $\beta = .10$ , 95%C.I. = .02, .56), marijuana ( $\beta = .09$ , 95%C.I. = .03, .49), and drugs ( $\beta = .08$ , 95%C.I. = .01, .38). By adding the indirect paths, the direct effect of emotion approach on attitudes toward the three illicit substances become non-significant.

### **Discussion**

The present research provided the first test of the associations between the approach and avoidance of emotions (need for affect) and attitudes toward the use of substances (alcohol, drugs and marijuana), while testing our assumption that excitement and normative values mediate this association. As expected, people higher in emotion approach were more positive toward drug use. Furthermore, this effect occurred because people who exhibited higher emotion approach attached more importance to excitement values, which predicted more favourably the drug use. Overall, our findings provided the first evidence linking need for affect and attitudes toward drug use, and also evidence for the mechanism mediating this association.

The findings also extended previous evidence of linkages between excitement and normative values and attitudes toward the use of drugs (Gouveia et al., 2007; Medeiros et al., 2015; Pimentel et al., 2011; Singh et al., 1983) and actual drug use

(Inman et al., 2017). Excitement values are more common in individuals who look for new sensations and who try different things (Gouveia et al., 2014a). This association is also in line with evidence that sensation seeking is related to the consumption of alcohol and cigarettes (Leeman et al., 2014; MacPherson et al., 2010). Interestingly, normative values were stronger linked to attitudes towards drug use than excitement values. We believe that normative values are somewhat stronger associated with marijuana and drugs than excitement values (absolute value of correlation/path coefficient) because the consumption of these substances is considered as illegal by the state and is thus directly related (negatively) to the content of normative values (e.g., obedience). In other words, normative values inhibit drug consumptions directly, especially those of illegal drugs (Schwartz et al., 2017). This interpretation is supported by stronger correlations between normative values and marijuana and other illegal drugs compared to the correlation between normative values and alcohol. In contrast, excitement values can be expressed in many ways and drug consumption might only be one out of many and not the most central attitude or behavior.

However, emotion avoidance was not a significant predictor of attitudes toward the use of different types of drugs. We therefore did not consider it when we tested the main mediation model of our study. This finding is consistent with the prior research finding non-reliable associations between emotion avoidance and excitement values, which were one of the two putative mediators of the predicted association with attitudes toward drug use. The other putative mediator, normative values, did not mediate the relations between approach of emotions and attitudes toward drugs. It may be the case that excitement values are stronger mediators because of their greater affective relevance, whereas the focus of normative values is on rules and norms. Furthermore, excitement values are directly conceptually supported by emotion approach, but

emotion avoidance does not preclude attaching importance to excitement values. That is, because of habits and social constraints, a person can prefer to avoid emotions even though they believe excitement is an important thing to experience.

It is also important to highlight that, even being non-significant, the positive relations between emotion avoidance and attitudes toward drugs consumption might indicate that emotion approach is not the only path to predict these attitudes. In fact, depression, which is related to emotion avoidance (Kahn & Garrison, 2009), is also associated with drug consumption (Grant, 1995). Thus, future studies could address the impact that depression has on the relation between emotion avoidance and attitudes toward drugs.

### **Limitation and Conclusion**

This study is not without limitations. We have measured attitude toward drug use but not actual drug use. However, previous research has identified strong associations between attitudes toward drug use and actual drug use (McMillan & Conner, 2006).

Our results show that holding normative values can be beneficial. This stands in contrast to a large amount of literature in the social sciences which displayed people holding normative values – mainly conservatives (Caprara, Schwartz, Capanna, Vecchione, & Barbaranelli, 2006) – as “atavistic” (Proulx & Brandt, 2017). For example, embracing and fostering normative values using established methods of value change (e.g., Blankenship, Wegener, & Murray, 2012; Rokeach, 1973) might therefore result in less favorable attitudes toward drugs and ultimately in lower drug consumptions.

Our findings also highlight the role of excitement values to predict attitudes towards drugs. As this value represents the physiological need for variety and pleasure (Gouveia et al., 2014a), and it is commonly associated with risk-taking behaviors (e.g.,

Gouveia et al., 2011; Medeiros et al., 2015; Monteiro, Coelho, Hanel, Pimentel, & Gouveia, 2018; Pimentel et al., 2011), its understanding can help to address the underlying motivations that lead people to have favorable attitudes towards the substances, or the actual consumption behavior.

Overall, individuals who have a higher emotion approach or need for affect are more likely to present a favorable attitude toward the use of alcohol, illegal drugs, and marijuana use. In addition, the results highlighted once more the importance of excitement values in predicting attitudes toward drugs. Through the importance that people attach to excitement values, emotion approach predisposes greater favorability toward drug use. Our evidence for this mediational model shows the importance of better understanding individual differences in the role of emotion as a target of personal self-regulation.

### **Declaration of Interest**

The authors report no conflicts of interest.

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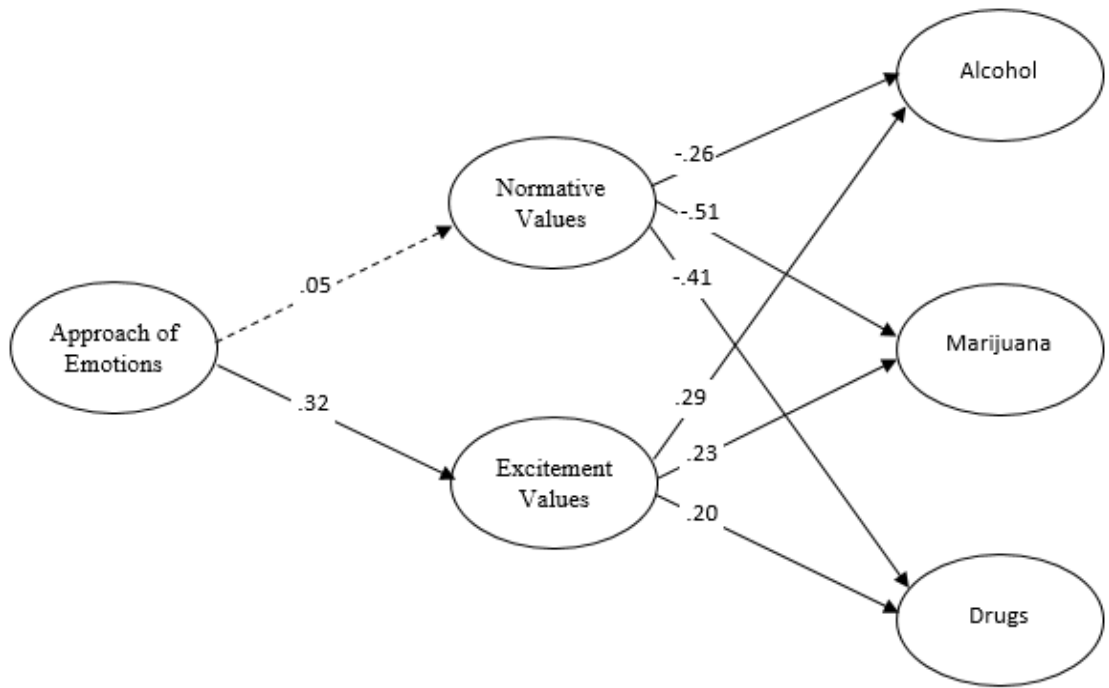


Figure 1. *Structural Equation Model*

*Note.* Continuous lines represent significant relations

Table 1

*The Functional Theory of Human Values – 3x2 Structure*

<b>Values as guides of actions (circle of goals)</b>				
		Personal goals	Central goals	Social goals
<b>Values as expressions of needs (level of needs)</b>	<i>Thriving</i>	<b>Excitement Values</b>	<b>Suprapersonal Values</b>	<b>Interactive Values</b>
	<i>needs</i>	Emotion	Beauty	Affection
		Pleasure	Knowledge	Belonging
		Sexuality	Maturity	Support
	<i>Survival</i>	<b>Promotion Values</b>	<b>Existence Values</b>	<b>Normative Values</b>
	<i>needs</i>	Power	Health	Obedience
	Prestige	Stability	Religiosity	
	Success	Survival	Tradition	

Table 2

*Multiple regression (and correlations) between values and need for affect, and attitudes toward drug use*

	Attitudes toward...			
	Alcohol	Drugs	Marijuana	Overall
Excitement Values	<b>.18*</b> (.23**)	<b>.14*</b> (.21**)	.11 (.22**)	<b>.17*</b> (.26**)
Normative Values	<b>-.24**</b> (-.25**)	<b>-.35**</b> (-.37**)	<b>-.45**</b> (-.45**)	<b>-.39**</b> (-.41**)
Emotion Approach	<b>.17*</b> (.18*)	.13 (.11)	<b>.25**</b> (.20**)	<b>.21**</b> (.19**)
Emotion Avoidance	.06 (.01)	.09 (.08)	.10 (.06)	.09 (.06)

*Note:* \*  $p < .05$ , \*\*  $< .01$