A mixed methods study of factors that support Educational Psychologist's confidence when working with children and young people with acquired brain injury.

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Abstract

Some estimates suggest that over 40,000 children acquire a brain injury each year (The Children's Trust, 2024e). According to the World Health Organisation (WHO) (2022) acquired brain injury (ABI) caused by external force (known as traumatic brain injury [TBI]) is the leading cause of death and disability in children and young people (CYP) worldwide. Whilst the majority of injuries will be classified as mild, the effects can be longstanding and often do not present until months or years post injury.

This study utilised a mixed methods design to examine the work that Educational Psychologists (EPs) are doing with children and young people with ABI and identify the factors that support their confidence when undertaking this work. Forty-three EPs from a range of employment contexts completed an online questionnaire. Higher confidence was reported for consultation and assessment which was also the most frequent type of work delivered. Participants were least confident about delivering training in relation to ABI. Seven participants took part in a follow up interview which revealed a range of factors which supported confidence. These include; access to additional learning through continued professional development (CPD) or additional qualifications, working collaboratively with other professionals, school staff and families, having an interest or additional experience, the employment context and a belief in the effectiveness of generalisable skills such as consultation.

This research adds to the very limited existing research base for EPs in the area of ABI. In synthesising knowledge on prevalence, causes and possible associated difficulties, and by drawing attention to current national developments it is hoped that this paper will go some way in supporting the professions

understanding of ABI. EPs should take confidence from the fact that participants in this research described similarities between their work with CYP with ABI and their work more broadly.

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1. Introduction

1.1 Chapter overview

The purpose of this chapter is to outline what is meant by the terms ‘confidence’ and ‘acquired brain injury’ (ABI). Consideration will be given to the impact of ABI on education and development when sustained during childhood. This will include providing information on measuring severity, prevalence, the national context and the role of the Educational Psychologist (EP). It will begin by outlining the genesis of the researcher’s interest in this area.

1.2 Researcher interest

This thesis is inspired by the researcher’s personal experience of traumatic brain injury (TBI) in a loved one shortly after beginning the Doctorate in Child and Educational Psychology (DCEP). This section will be written in first person.

Four weeks after commencing the DCEP my partner sustained a severe TBI, (although this terminology was not used with me at the time), following a road traffic collision. He spent 33 weeks receiving medical inpatient care, in the most part, on a specialist neurological rehabilitation unit. During the initial phase of his unconsciousness, I set about trying to learn as much as I could about brain injury. Everything from the earliest signs of consciousness returning and how this was measured or determined, right through to how life might look at the end of recovery and how I could support the best possible outcomes to be achieved. Initially I was reminded of the ‘Biological Basis of Psychology’ module I had completed as part of my Master of Psychology degree. I was encouraged by the excitement I recalled at the content that was covered. I felt I had some basic level knowledge of the brain I could build from. I quickly discovered the book ‘The Brain that Changes Itself’ (Doidge, 2007) which I read whilst commuting to, and from the hospital for my weekly visit (COVID-19 and the demands of a doctorate meant visiting was limited). I was particularly struck by Doidge’s account of helping his father, a stroke victim, relearn many of his previously lost skills. This book gave me hope, insight and motivation. Best of all, you didn’t need a degree in neuroscience to understand it!

Over the months I worked with a huge multi-disciplinary team of professionals who, day by day with patience and repetition helped my partner recover enough that he could return home to live with me. It’s been a long, at times difficult journey and it isn’t over yet. But I came to realise that I had acquired knowledge about ABI that was greater than might typically be expected for a Trainee EP. I also realised that ABI is common, very relevant to the work of EPs and very under published in the field. I was inspired to learn more about ABI in children specifically and to share my learning with others. Through that, this thesis was born.

1.3 Defining confidence for the purposes of this research

A key focus of this research is the concept of confidence. In 1977 Bandura introduced the term ‘self-efficacy’ as a means of referring to one’s own judgement of “how well one can execute courses of action required to deal with prospective situations”. The concepts of confidence and self-efficacy are closely linked (Feltz & Öncü, 2014; Kane et al., 2021; National Research Council, 1994) however, a key distinction is that self-efficacy is context dependent (Cherry, 2024). This makes it is an appropriate framework through which to explain confidence in relation to this research, as participants were asked about their confidence in relation specifically to working with CYP with ABI.

According to Bandura (1977) self-efficacy beliefs develop through four primary sources: Mastery experiences, vicarious experiences, social persuasion and emotional and physiological states. Mastery experiences refer to previous situations in which success was achieved. These are said to be the most influential source of self-efficacy belief as they provide the most concrete evidence that one possesses the skills and ability required to be successful. Vicarious experiences refer to observations of the success of social role models. Seeing others one considers similar to oneself succeed is likely to increases one’s own belief that they too can succeed. Social persuasion refers to the verbal encouragement received from others that persuades one to believe they are capable of achieving. Finally, emotional and physiological states refers to the impact ones mental and physical health has on their ability to believe they can achieve.

For the purposes of this research the concept of confidence should be considered through the lens of self-efficacy described above.

1.4 Defining acquired brain injury and its causes

ABI is a term used to describe damage to the brain, however slight, that has resulted from an accident or illness that was not present at birth (Morrall, 2016). During an ABI, the neuronal circuit is interrupted causing disturbance in the messages sent from one part of the brain to another (Pekna & Pekny, 2012). In some instances, this is temporary, for example due to brain swelling or neuronal bruising. However, unlike other parts of the human body such as skin and bones, severed neurons cannot repair and damage is permanent.

ABI can be both traumatic (known as traumatic brain injury [TBI]) or non-traumatic in nature. TBI is caused by external forces whereas other forms of non-traumatic injury result from internal causes such as infection (The Children’s Trust, 2024a). The terms ABI and TBI are often used interchangeably within the literature, however, ABI is the umbrella term, of which TBI is a form. A TBI can be either open or closed in nature. Open (or penetrating) injuries are those which result in a break to the skull, such as those caused by gunshot, and tend to cause damage to a specific brain area (National Institute of Neurological Disorders and Stroke [NIH], 2023). Closed injuries are caused by an external force strong enough to move the brain around within the skull. These injuries are often exacerbated by the fact that the inside of the skull is rough which can cause cerebral lacerations (Great Ormond Street Hospital for Children GOSH], 2019) and makes the prefrontal cortex particularly susceptible to injury caused by acceleration and deceleration. The following are some examples of TBI causes:

- Sporting accident/injury
- Fall or accident
- Road traffic collision
- Assault
- Child abuse

Non traumatic brain injury causes include:

- Stroke
- Meningitis
- Brain tumour (malignant or benign)
- Brain haemorrhage (bleeding on the brain)
- Aneurysm (a bulge in a blood vessel in the brain)
- Encephalitis (when the brain tissue becomes inflamed, either because of an infection or through an autoimmune condition)
- Hypoxic/anoxic brain injury: Hypoxic injury is caused by a lack of oxygen to a part of the brain, anoxic is when there is an absence of oxygen to a part of the brain. These injuries can occur in any circumstance where breathing is affected (including, but not limited to, near

drowning, asthma attack, smoke inhalation, choking, poisoning, inhalation of carbon monoxide, heart problems).

1.5 Measuring brain injury severity

TBI is classified as mild, moderate or severe. Mild TBI is also often referred to as mild head injury or concussion and is notoriously difficult to identify (Headway, 2024e). There are a range of assessment tools available for assessing brain injury severity, however the most commonly used is the Glascow Coma Scale (GCS) (Teasdale, 2014; Teasdale & Jennett, 1974), which objectively measures the patients level of consciousness. Using the GCS the patient is given a score for the domains of eye opening, movement and speech. These scores are combined to generate the overall GCS score. A score of three indicates complete unresponsiveness and a maximum score of 15 is given when the patient is fully conscious and oriented (see table 1.). Despite its wide usage the GCS has been criticised for being unspecific unreliable and poorly understood (Tenovuo et al., 2021).

Table 1

The Glascow Coma Scale (Teasdale, 2014)

Component tested	**Score**
Eye opening	
Spontaneous	4
To sound	3
To pressure	2
None	1
Best motor response	
Obeys commands	6
Localising	5
Normal flexion	4
Abnormal flexion	3
Extension	2
None	1
Verbal response	
Oriented	5
Confused	4
Words	3
Sounds	2
None	1

A TBI is classified as severe when the patient presents with a GCS of <9, moderate when GCS 9-12 and mild when GCS 13-15, although there is some debate regarding the inclusion of GCS 13 in the mild category. The lower the GCS of the patient, the higher the risk of mortality (BMJ Best Practice, 2023).

A range of adapted versions of the GCS are available for use with infants and children which are reflective of expected speech and motor development (Children's Health Ireland, 2018; Christensen, 2023; MSD, 2014), however there does not appear to be an agreement regarding which tool to administer with children of which age and therefore an element of clinician discretion is required.

A period of unconsciousness is followed by a period of post traumatic amnesia (PTA), during which the patient will appear conscious and awake, but will have no continuous memory of day-to-day events and may behave in bizarre, uncharacteristic manner (Headway, 2024g). Length of time in PTA can range from a few minutes to several months (in rarer cases) and is assessed for using The Westmead PTA scale (Shores et al., 1986). This is a standardised measurement tool, used on patients aged seven and over with a closed head injury. Assessment begins when the patient has regained consciousness and can communicate intelligibly. It continues until they score 12/12 over three consecutive days on questions assessing orientation and memory. At this point PTA is considered resolved. The length of time unconscious is correlated with the length of time in PTA (Hannay et al., 2004).

The National Institute for Health and Care Excellence (NICE, 2023) provides criteria for selecting people for a CT head scan depending on age (see appendix A). These criteria set out that most children under the age of 16 who present at the emergency department with an altered level of consciousness will receive a scan. The results of this neuroimaging, when considered with the length of time unconscious and in PTA, are used to determine brain injury severity. However, there is some inconsistency in the literature regarding the criteria for each classification (Friedland & Hutchinson, 2013).

Table 2 details the categorisation system used by Headway (2024d), the UK national brain injury charity.

Table 2

Brain injury severity classifications (Headway, 2024d)

Brain injury severity	Length of loss of consciousness	Duration of PTA
Mild brain injury	<15 minutes	< 1 hour
Moderate brain injury	15 minutes - 6 hours	1 hour – 24 hours
Severe brain injury	6 hours – 48 hours	24 hours – 7 days
Very severe brain injury	> 48 hours	> 7 days

The measurement of non-traumatic injury is more complex due to the wide range of injury causes (The Children's Trust, 2024b). The GCS may be used in instances of non-traumatic injury where the child experiences disordered consciousness, however, this measure is not applicable to all forms of ABI and a range of tools are used depending on the suspected cause of the injury. For example, a lumber puncture is used to determine the presence of meningitis (WHO, 2023) and the cancer staging and grading system (NHS, 2021b) is used to determine the severity of childhood brain tumour (Cancer Research UK, 2022a). Neuroimaging is also commonly used to determine the cause of suspected ABI in children including tumour (Cancer Research UK, 2022b), Stroke (The Royal College of Paediatrics and Child Health [RCPCH], 2017), encephalitis (Jones, 2023) and haemorrhage (NHS, 2021a).

1.6 The definition of brain injury for the purpose of this research

For the purposes of this research the term 'acquired brain injury' includes causes both traumatic and non-traumatic in nature.

Epilepsy, Cerebral Palsy (CP) and mild TBI are excluded from the definition of ABI used in this research for the following reasons:

Whilst it is widely acknowledged that repeated, prolonged epileptic seizures result in lasting damage to the brain, there is currently little scientific evidence to support the claim that isolated, brief seizures lead to neuronal death (Dingledine et al., 2014; Sutula & Pitkänen, 2002). Whilst there is a body of research and information focusing on epilepsy as a symptom of previous ABI, particularly TBI (Ding et al., 2016; Fordington & Manford, 2020; Headway, 2013; Lucke-Wold et al., 2015) epilepsy is referred to and researched within the literature as a syndrome distinct from ABI.

Similarly, whilst CP may result from an ABI and approximately ten percent of diagnosed childhood CP is considered acquired, 85-90% of all CP cases are congenital, (present at birth) (Centers for Disease Control and Prevention[CDC], 2023). The distinction between CP and ABI is that for a diagnosis of CP to be given the onset of symptoms must occur during the period of whole brain development and not result from an alternatively diagnosable condition such as an infection or a TBI. For the purposes of CP diagnosis, the period of whole brain development is loosely considered to be the first few years of life (CDC, 2023; NHS, 2023; NIH, 2021).

Most TBIs are classified as mild (CDC, 2022), the vast majority (90%) of those reported do not involve a loss of consciousness (Headway, 2024e) and it is widely acknowledged that patients who sustain a mild injury do not present for medical treatment. Even when patients do present with symptoms consistent with a diagnosis of mild TBI, these diagnoses are often not recorded as such (Powell et al., 2006) and therefore patients may not consider themselves (or their children) to have suffered a TBI. With this in mind, it is likely that many mild TBI's are not reported to school staff or shared with EPs and therefore EPs will not be considering TBI as part of their formulation. It is likely to be for this reason that most of the literature regarding EP work with ABI focuses on children who have experienced a significant hospital stay.

1.7 The prevalence of ABI in children

Accurate statistics on childhood brain injury are difficult to source. Some suggest as many as 700,000 children per year present at emergency departments with a recent head injury, in England and Wales (NICE, 2019). Although, it is not clear how 'head injury' is defined in these statistics and therefore which causes have been included/excluded. In addition, there will likely be thousands more injuries that did not require medical treatment and therefore are not accounted for in any statistics. This is particularly pertinent in paediatric TBI, as children require a two to three-fold greater impact to produce clinical symptoms compared with adults (McCrory et al., 2004), likely resulting in many injuries being missed, or under categorised, regarding severity.

According to the WHO (2022) and recent NHS statistics (Matrix Neurological, 2024) TBI is the leading cause of death and disability in children and young people. It's prevalence in the general population vastly outweighs that of Autism (Nasen, 2018; RCPCH, 2017) and there has been a 12% increase in hospital admissions for head injury in the UK since 2005 (Headway, 2022b).

Whilst non traumatic injury is less common in children, approximately 400 children per year in the UK suffer a stroke (NHS, 2022b) and similar numbers of children develop a brain tumour (Thorp, 2022). Statistics on the prevalence of meningitis are difficult to source, however it is estimated that there are approximately 8000 cases in the UK per year (Meningitis Now, n.d.) and it is usually more common in children and young people than in adults (GOSH, 2014). The Children's Trust (2024e) estimate that over 40,000 children acquire a brain injury each year, which equates to one pupil in every classroom (The Children's Trust, 2024e). Many of these CYP will experience lasting effects.

1.8 The sleeper effect in children

Whilst damage in the form of severed neurons is irreversible, a functional recovery is possible through the process of neuroplasticity (Denslow, 2021). This is the brain's ability to adapt and modify in response to experience or injury, and the process through which new neuronal connections are made (Von Bernhardi et al., 2017). A common misconception of childhood injury is that the surging neuroplasticity present in the early years of life (Dennis et al., 2013) makes a full recovery more likely than when an injury occurs in adulthood. In fact, the opposite is true. Rather than increase the likelihood of recovery, injury to the developing brain renders children more susceptible to long term complications due to, what is often referred to, as the 'sleeper effect'. The sleeper effect refers to the fact that difficulties resulting from a brain injury in earlier life may not be immediately apparent and may emerge as much as several years post injury (Nasen, 2018).

Childhood ABI alters the trajectory of typical development, the effects of which, even in more minor injuries, are often not evident for many years (The Children's Trust, 2024d). The brain develops in a somewhat hierarchical fashion, within which some areas do not typically become engaged until early adulthood (Tierney & Nelson, 2009). It is only when the injured area would typically become engaged that difficulties may become apparent. For example, it is widely recognised that difficulties with executive functioning follow an ABI (Keenan et al., 2021; Krasny-Pacini et al., 2017), in part due to the fact that these skills are processed in the prefrontal cortex, which is particularly susceptible to injury (Headway, 2024c). Executive functioning is considered a higher-level skill which does not fully develop until early adulthood (Best & Miller, 2010). Therefore, any difficulties relating to skills in this area may not be apparent until early adulthood when it would be expected that they would begin to be demonstrated, despite the injury occurring much earlier in childhood.

1.9 Brain injury and special educational needs

Survival rates following ABI are good (Trefan et al., 2016) but the effects can be wide reaching and long standing. The range and extent of difficulties correlates to the location and severity of the injury (Novack & Bushnik, 2019). Focal injuries, (those confined to a localised area), such as strokes tend to result in deficits in the functions for which the injured part is responsible. Diffuse injuries, (those that are widespread, often resulting from brain movement within the skull), such as TBI tend to result in more widespread functional deficit. Those who sustain a severe injury are more likely to experience permanent effects, compared with those who suffer a mild injury; however, severity is not always an accurate predictor for recovery outcomes (The Children’s Trust, 2024a).

Even when an injury is classified as mild, the effects can be long standing. Whilst symptoms of concussion mostly resolve within a matter of weeks, in some cases they can persist for several months (Headway, 2024e). The long-term neurological outcomes of repeated minor injury have been the subject of increasing research, with the latest findings suggesting that that those who experience three or more concussions have worsened brain function later in life (University of Oxford, 2023). A link has been found between concussion and later occurrence of progressive neurological conditions such as chronic traumatic encephalopathy, Alzheimer's and Parkinson's (Alzheimer's Society, 2023; NHS,2022a; Russell et al., 2021; University of Glasgow, 2019). In recognition that the developing brain is more susceptible to these forms of injury, the Football Association has issued guidance restricting the use of heading the ball in the under 18 population (BBC News, 2020).

Regardless of the cause, the impact of brain injury is wide reaching; difficulties span the four broad areas of special educational need and disability (SEND) outlined within the Code of Practice (DfE, 2015) and high proportions of children return to mainstream schooling post injury (Bate et al., 2021).

Physical and sensory difficulties can include altered balance and co-ordination, muscle weakness or paralysis, fatigue, sensory sensitivity to particular sensory stimuli (e.g. noise or light), loss of senses and difficulty swallowing. Physical symptoms of ABI are often those to recover most quickly (Headway, 2024f). This can mean that the child appears as though they are fully recovered and with the residual effects much less visible, brain injury is often referred to as a hidden disability (Headway, 2022a; The Children's Trust, 2024a; Wilkinson, n.d.)

Communication difficulties are also common following an ABI (Headway, 2024a). Whilst most children will retain the ability to communicate verbally at the level they were able to pre injury, continued development of these skills may be affected, resulting in later impairment of language and vocabulary skills (The Children's Trust, 2024c). Communication skills may also be impaired by deficits in skills required to converse efficiently and effectively. For example, ABI may result in word finding difficulties, slower processing speeds, difficulty following the social rules of conversation such as turn taking, or difficulty inhibiting inappropriate verbal responses (The Children's Trust, 2024c).

The ability to interpret nonverbal communication such as gesture or facial expression may also be impacted (The Children's Trust, 2024c).

Attention difficulties are also common and links have been found between brain injury and attention deficit hyperactivity disorder (ADHD) (Keenan et al., 2008). The difficulties mentioned are likely to impact on a child's ability to function within a mainstream classroom and engage fully and successfully with the learning. Many children are left with a specific learning disability following an ABI (Rivara et al., 2012) and recent research has even revealed that injury can result in reduced brain volume for some children (Head, 2022). Difficulties such as poor memory, including working memory, challenges learning new information, executive dysfunction and inability to follow instruction can categorise children with an ABI as having SEND.

Social emotional and mental health difficulties can result both directly and indirectly from ABI. Difficulties keeping up with learning may result in low self-esteem and impact the child's motivation. Fatigue may also hinder their engagement in social activities. Children with an ABI may be at increased risk of bullying or find that others treat them differently due to a lack of understanding. Social isolation can be perpetuated by children needing to spend significant periods of time away from their peers whilst receiving treatment. Children may also experience emotions differently post injury, either appearing to be over emotional or lacking in empathy. Feelings of social anxiety, irritability, mood swings, anger and depression are common (Headway, 2024b).

The hidden disability element of ABI can cause further difficulty. Disability is considered a protected characteristic under the Equality Act (2010) however, those whose disabilities are hidden can face increased challenges due to lack of awareness, understanding and stigma, or disregard or disbelief due to the difficulty not being outwardly observable (Kelly & Mutebi, 2023). These challenges may result in unrealistic educational expectations or educational exclusion (Bent, 2024; Day, 2022; Skills for Health, 2021).

1.10 The national and legislative context

In addition to the SEND code of practice (DfE, 2015) and the Equalities Act (2010), previously mentioned, the following provides an overview of the current national landscape in regards to ABI ad education.

In 2017 an All Party Parliamentary Group (APPG) on ABI was formed to raise awareness of ABI and seek improvements in support for those affected. In September 2018 they published their ‘Time for Change’ report, which made a number of key recommendations in areas including, but not limited to, education. These recommendations included:

- The inclusion of ABI within the SEND Code of Practice (DfE, 2015);
- A minimum level of awareness and understanding among all educational professionals;
- The promotion of the ABI Card for under 18’s in schools, hospitals and local education authorities; and
- An agreed return-to-school pathway plan.

In order to address some of these recommendations, the National ABI in Education and Learning Syndicate (N-ABLES), consisting of professionals from a range of backgrounds and settings (including Educational Psychology), was established. In May 2021 they (N-ABLES) launched a publication to help professionals involved in supporting CYP return to education.

In June 2021, Chris Bryant MP presented a Private Members Bill to the House of Commons entitled ‘Acquired Brain Injury Bill’, for the purpose of making provision about meeting the needs of adults and children with ABI; and for connected purposes. Within this, it is stated that guidance in relation to the following must be issued:

> “the provision of relevant services for the purpose of diagnosing acquired brain injury, including in prisons, schools and the armed forces” (6.c, page 4)
>
> “the identification of adults and children with an acquired brain injury, including in schools, youth services, prisons and the armed forces” (6.d, page 5)
>
> “the training of staff who provide relevant services to adults and children with an acquired brain injury, including teachers, educational psychologists and those who assess welfare payments” (6.g, page 5)

In December 2021, ahead of the second reading of the Bill, Bryant’s campaign, supported by brain injury charities including, The Child Brain Injury Trust, Headway, The Children’s Trust, The Disabilities Trust and the UK ABI foundation (UKABIF), resulted in the UK Government committing to publishing a cross departmental ABI strategy (A Strategy for Acquired Brain Injury, n.d.). In March 2022 a call for evidence began (Department of Health and Social Care). Brain injury survivors along with their families, friends, healthcare professionals, organisations, researchers and more, were asked to give their views and ideas regarding what should be prioritised within the strategy. Among the priorities suggested, ‘awareness of ABI in education settings’ appeared within the ‘scope of the strategy’. ‘People in education’, (presumably including children) were identified as a potential specific group requiring support, when considering which areas the strategy could look to focus on, to better support those with ABI. Despite being targeted for release in April 2023 (Johnson, 2023), the strategy currently remains unpublished.

Following the launch of a funding opportunity, to establish a UK TBI platform, by UK Research and Innovation (UKRI), in December 2022(b), an announcement was made in June 2023, of a research platform, led by the University of Cambridge, which claims to “transform the way survivors of traumatic brain injury are diagnosed and treated in the UK” (UKRI, 2023). The initiative involves establishing a UK wide research platform (UK-TBI REpository and data PORTal Enabling discoveRy [TBI-REPORTER]) which will connect leading experts and enable a co-ordinated approach to a wide range of TBI research across the lifespan, with a view to accelerating the impact of research outcomes. It is not clear why the focus of the platform is specifically TBI, and not ABI more generally, but it perhaps reflects the fact that there is currently no co-ordinated approach to research into TBI, which has a breadth of causes and effects. Perhaps also, there may be less empathy for patients of TBI compared to other specific ABI causes as it may be easier for others to make dispositional (internal) rather than situational (external) attributions (Heider, 1958). For example, the higher rates of TBI in males compared with females, particularly in childhood and adolescence (Collins, 2012) may be attributed to increased risk taking behaviour (Andreoni et al., 2020) and thus elicit less sympathy.

Whilst there has been increased interest and momentum over the last few years regarding ABI, it takes considerable time to enact, implement and review the effectiveness of change. Therefore, it currently remains that much of the guidance available, in relation to supporting CYP with an ABI in school, is created and published by charities such as The Children's Trust, The Children's Brain Injury Trust (CBIT), Headway and UKABIF.

1.11 What does all this mean for EPs?

Most neurorehabilitation for CYP with ABI takes place in school (APPG, 2018) and research has found that cognitive rehabilitation programmes are more effective when carried out in naturalistic settings, such as schools (Slomine & Locascio, 2009). However, in order to deliver supportive intervention programmes, adults require access to training which provides a sound knowledge base (Bennett et al., 2002) and there is limited training offered to teachers in this area (The Children's Trust, 2024e). All schools in the UK have access to an EP service and the far-reaching educational implications of ABI mean that EPs are well placed to support school staff. This is corroborated by Ball and Howe's (2013) research, in which participants felt that the EP has a crucial role in supporting children reintegrate into school. Training is one of the core functions of the EP role (British Psychological Society [BPS], 2023), which suggests that they may be well positioned to fill the gap left by teacher training in this area.

With this in mind, what training knowledge and experience do EPs have in this area? Do they feel equipped and confident enough to provide the support it appears schools require? The evidence suggests perhaps not.

Since 2006 all trainees in Educational Psychology in England, Wales and Northern Ireland have been required to complete a three year Professional Doctorate (Association of Educational Psychologists [AEP], 2022; UCL, 2016). The BPS (2023) sets out the standards for the accreditation of these doctoral programmes, which includes the core competencies trainees are required to demonstrate in order to qualify. These competencies make no mention of children with ABI. This is perhaps not surprising given that a search of the SEND Code of Practice (2015) revealed just one mention of 'head injury' (3.10, page 40) among its 292 pages. This mention is in the context of joint commissioning arrangements and is not relevant to EPs.

Whilst the majority of EPs work in Local Authority (LA) (BPS, n.da) they may also be employed within specialist settings by organisations such as the National Health Service (NHS), schools (in the state and independent sector) and charities (AEP, 2022). Some of these EPs may have undertaken additional qualifications in clinical paediatric neuropsychology. University College London (UCL) is currently the only institution in the UK to offer a programme of this kind, that is accredited by the BPS. Applicants must be qualified clinical or educational psychologists registered with the BPS and on the Health and Care Professions Council (HCPC) register. Whilst the title of 'Neuropsychologist' is not currently protected under the HCPC regulatory framework, the BPS host a 'Specialist Register of Clinical Neuropsychologists'. In order to join the register applicants must have completed the society's qualification in clinical neuropsychology (BPS, n.d.b). The UCL clinical paediatric neuropsychology course fulfils the academic (knowledge and research) component required. However, to join the register, applicants also need to complete a practice dimension, which requires access to appropriate clients with a range of neuropsychological presentations, and supervision from a supervisor who is already on the register. For these reasons, along with the significant financial commitment, it is unlikely that this is accessible for the majority of EPs, particularly those working within LA contexts.

The published literature on EPs and ABI is limited, however, many EPs do not feel that they have had access to sufficient training in order that they would feel equipped to deliver this to schools. Bozic and Morris (2005) reported that only a minority of EPs felt that their initial training or subsequent continued professional development covered ABI in sufficient detail. Whilst it is acknowledged that this research predates the current training requirements, more up to date research is not available. Additionally, the recommendation made by Bryant (2021) that there should be guidance on the training of all staff who provide relevant services to adults and children with ABI, including EPs, suggests that there is currently no guidance in place that ensures a minimum level of training within the profession. For further information regarding what the research literature tells us about the knowledge, skills and training of EPs in this area, please see literature review, below.

2. Review of the literature

2.1 Chapter overview

The purpose of this chapter is to critically review the current research base in relation to childhood ABI and education. In particular, consideration will be given to how schools are currently providing support for children with ABI and the role of the EP within that. The rationale for the review type and an explanation of the review strategy are provided, followed by the findings of the review.

2.2 Review type and strategy

A systematic literature review was chosen over other review types (e.g. narrative review) for its quality, transparency and replicability (Siddaway et al., 2019). Additionally, a systematic approach seeks to provide an unbiased assessment of available literature, unlike other review types, which may be more likely to include research selected by the author, and thus be open to researcher subjectivity (Jahan et al., 2016). Other characteristics of the systematic review approach are: a clearly defined research question (or questions) and the use of inclusion and exclusion criteria (Jahan et al., 2016).

An initial scoping review was carried out in September 2022, of articles published in the British Journal of Educational Psychology and Educational Psychology in Practice. The search term ‘brain injury’ was used to explore what has been published about brain injury for an EP audience in the UK. This search revealed one paper from 2013 (Ball & Howe).

A number of searches were then carried out before the final search terms and refinement criteria for the systematic review were decided upon. For information regarding all searches carried out, numbers of papers found and justification for particular limiters please see appendix B.

Searches were carried out between 1st August 2023 – and 31st August 2023 and an initial review of literature was undertaken. However, following consideration of the replicability of the search strategy, a final search and resultant literature review was undertaken in August 2024.

The questions asked of the literature in this review were:

- What do we know about how schools are supporting children with ABI and where school staff are drawing support from?
- How are EPs supporting children in school with ABI?
- What do we know about EP's working with children with ABI?

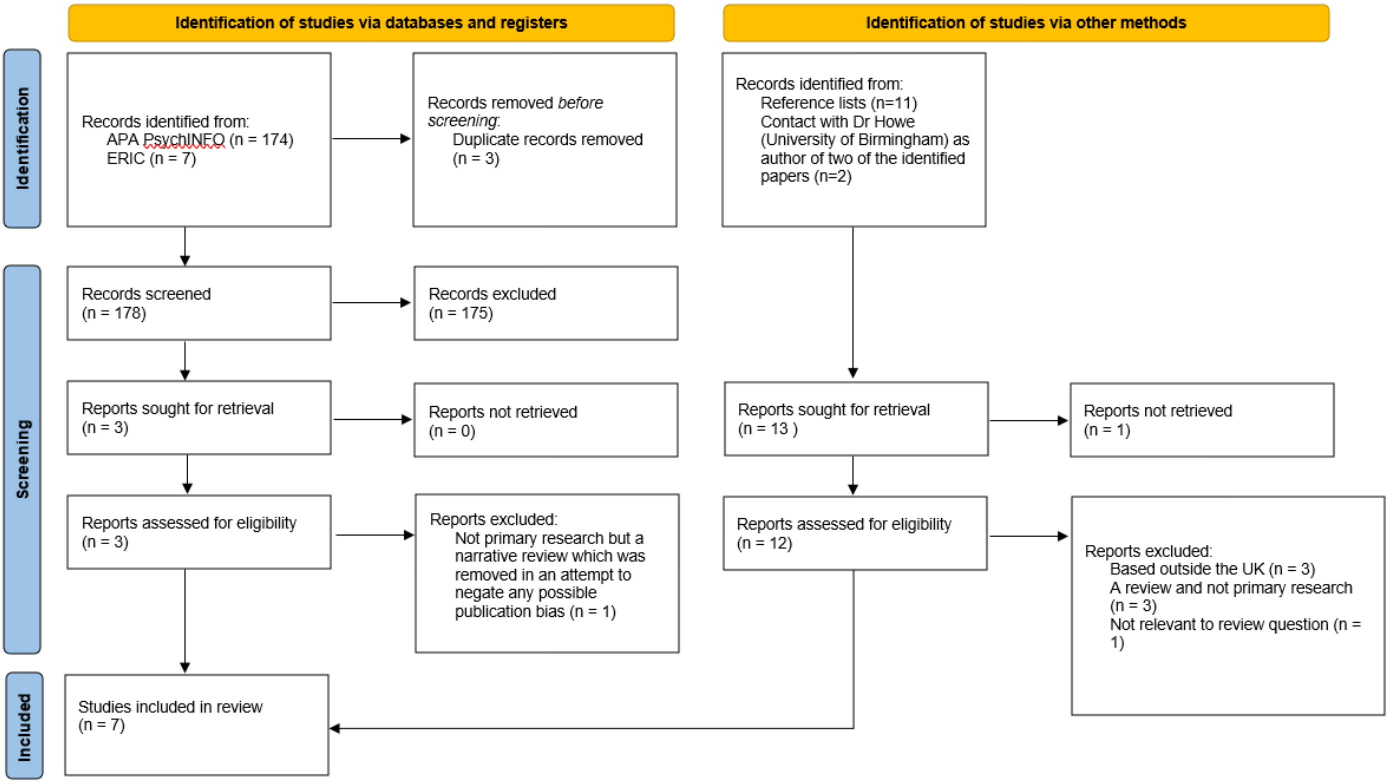
On 15th August 2024 EBSCO host database was used to search PsychINFO and ERIC using the terms 'brain injury' AND 'child*' AND 'educational psych*'. The use of an asterisk broadened the search to include terms with various endings to the same initial letters. The following limiters were applied:

- Published between 2015 and 2024 in a peer reviewed academic journal
- Written in the English Language
- Based in the UK (refined by selecting 'United Kingdom' within the 'geography' filter)

The Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) (Page, et al., 2021) has been used to visually depict the number of articles identified at each part of the search process. See figures 1 and 2.

Figure 1

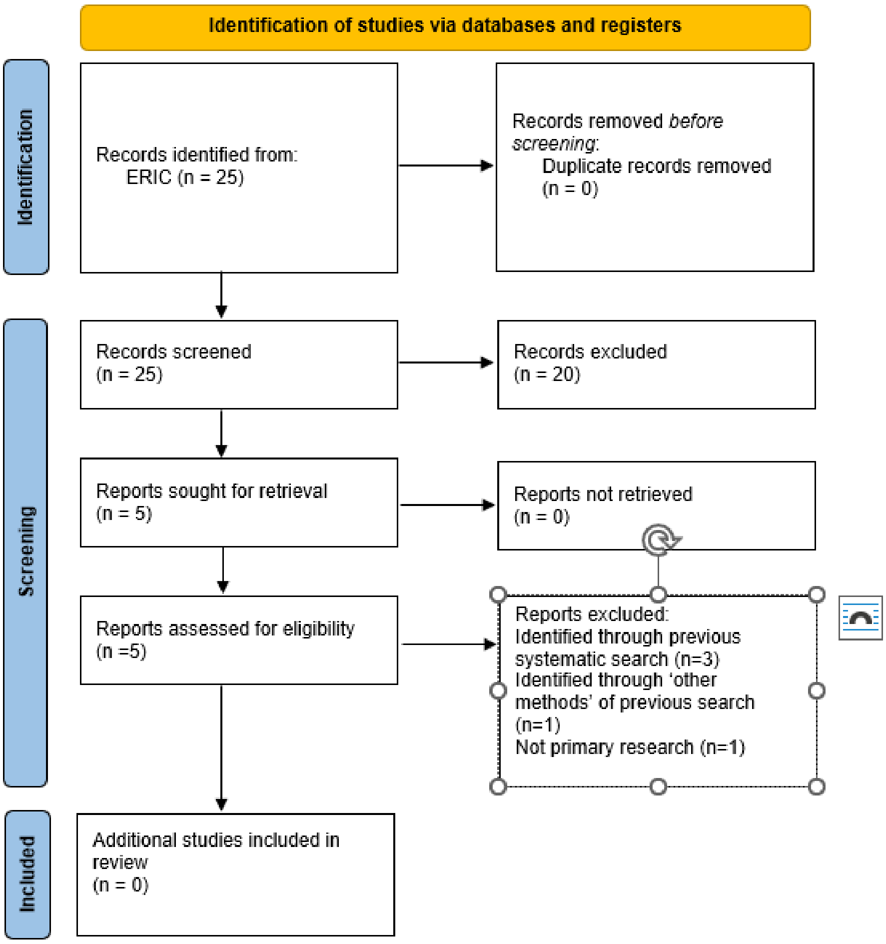
Systematic literature review initial search



A further search was conducted on 15th August 2024, using EBSCO host database to search ERIC. The rationale for limiting this search to ERIC, and excluding PsychINFO was the focus of the search being educational support and as such, the psychological literature held by PsychINFO was deemed of less relevance. The terms ‘child*, AND ‘brain injury’ AND ‘support’ AND (‘school OR education’) were used. The use of parentheses specifies the order in which the search terms are interpreted (EBSCO Connect, 2022).

Figure 2

Systematic literature review secondary search



Justification for refining the systematic searches to papers published from 2015, pertained to the fact that brain injury is largely considered a matter for health professionals. The introduction of the Children's and Families Act (2014) which brought in Education Health and Care Plans (EHCPs), emphasised a more joined up approach between education, health and care professionals, with the first of these documents being issued in 2015. Despite this, due to its relevance to the literature review questions, Ball and Howe's (2013) paper has been included in this review.

One unpublished thesis (Renton, 2023) was obtained subsequent to correspondence with Dr Julia Howe (see Figure 1). Renton explored the role of the EP in supporting CYP post ABI and therefore, despite remaining unpublished (likely to due to recency of completion), due to its relevance to the review questions and similarity to this research, has been given some attention here.

Several attempts have been made to explore if there are any other unpublished thesis' relevant for inclusion in this review. However, due to a cyber-attack on the British Library which occurred in October 2023, the Electronic Theses Online Service (EThOS) remains unavailable and thus, this has not been possible.

A total of seven papers and one unpublished thesis are included in this review. These will now be reviewed chronologically, before consideration is given to their findings in relation to each of the literature review questions.

2.3 Findings of the review

Hawley et al. (2004) used a mixed methods approach to examine the return to school of children who had sustained a TBI of varying degrees of severity. They used semi structured interviews with parents and children covering the topics of behaviour, emotion, cognition, physical difficulties, sensory needs, mobility, school work, school "problems" and support offered to the child by the school (asked of parents only). Teachers of those who were attending school and consented, were contacted to complete a questionnaire exploring their knowledge of TBI and the child's educational performance and SEND, before and after injury. The researchers also compared classroom performance of pupils with non-injured controls using a number of standardised assessments, including the Wechsler Intelligence Scale for Children, Third Edition (WISC-III) to measure performance.

Hawley's paper is dated, and has a number of limitations, including the fact that the authors do not declare, or account for, variations in participant numbers and the fact that these do not add up throughout the paper. The primary author also does not have an educational background. This may limit the extent of their understanding of the SEND system and account for some assumptions made within the paper that unless a child has undergone a statutory assessment, they are unlikely to receive specialist help. For these reasons, limited weight will be placed on the findings of this research. Some interesting findings do emerge from the interviews with children and parents and the questionnaires from teachers however, which will be commented to.

The majority of parents said that their child's teacher was aware of the ABI, however, schools were primarily reliant on being informed by parents or the children themselves. There was just one instance of the school being informed by the hospital. Some parents reported that their child's primary school had been informed of the injury, but that this information was not passed on to the secondary school.

Despite two thirds of the children having difficulties with schoolwork just 29.9% of parents reported that their child had been provided with extra educational assistance and this was most likely when the child's injury was defined as severe. Special arrangements tended to be made to accommodate physical differences, rather than cognitive impairments, however this may be reflective of the hidden disability element of brain injury and the understanding surrounding this at the time the research was carried out.

Bozic and Morris (2005) used a questionnaire to explore the extent to which EP practice routinely included work with CYP with ABI and to explore the extent to which EPs felt their initial training or CPD activities provided them with the knowledge and skills necessary to engage in this work. Consideration was also given to factors that may have influenced any emerging differences, such as place of employment and initial training provider.

Whilst it is acknowledged that there has been a significant change in the initial training programme for EPs, namely the introduction of the Doctorate programme, since this research was carried out, it has been included in this review for several reasons. Firstly, it is the only piece of published research that utilises EPs as the sole participant group. Secondly, unlike much of the other identified literature, the participant sample is drawn from a broad geographical area and finally, the similarity with this research will allow some comparisons to be drawn.

One hundred and seventeen EPs from thirty EP services completed the questionnaire with representation from all EP training providers at the time. The vast majority of respondents reported receiving very little or no coverage of TBI during their initial training, with no differences noted between regions or training providers. CPD activities were the primary source for EPs developing their knowledge and understanding within the field of neuropsychology and/or ABI, however, for the majority of EPs this was not a substantive focus of CPD activities. Fifty-five respondents indicated that work with CYP with ABI formed an active focus for casework or consultation activity and these respondents took part in a follow up questionnaire where they were asked to comment on:

- How fully neuropsychological factors relating to the brain injury were addressed in professional assessments and reports;
- The extent to which reports on the child's file identified provisions relating to the child's brain injury; and
- Whether, in addition to the agencies 'routinely' involved in assessment of SEND and 'statementing', 'specialist' professionals or agencies with expertise in the field of clinical neuropsychology/TBI had contributed to the assessment or provision of advice relating to educational provisions to address the child's needs.

In a small majority of cases professional assessment and advice specifically addressed the impact of the brain injury and how to support the functional implications of this within the educational setting. The majority of the professional involvement commented on in the responses related to securing specialist provision through statutory processes and despite the limited opportunities to engage in learning or CPD relating to this type of work, as highlighted in the first phase of the research, EPs were frequently the highest qualified educational professionals and the only psychologists involved in contributing to planning for the child’s education post injury.

Ball and Howe (2013) used semi-structured interviews to explore how Educational Psychologists can support the reintegration of children with an ABI, upon their return to school. Participants (N=8) came from a range of professions, (Paediatric Neuropsychology, Clinical Psychology, Speech and Language Therapy, Occupational Therapy and Educational Psychology) and worked within one of two specialist settings; a specialist rehabilitation centre and a children’s hospital with a specialism in paediatric neurology. Questions were structured around the following four categories: processes, roles, role of the EP and rehabilitation. Two main themes emerged from the findings:

> “The need for improved communication between professionals, particularly upon the young person's discharge from hospital.”
>
> and
>
> “The need for training for education staff, including raising awareness of the changing needs of children with an ABI as they develop.”

Howe and Ball’s paper concludes by making seven recommendations for where they feel EPs could contribute to supporting children who have ABI. These span the three levels at which EPs work; individual pupil, group and system.

Despite the focus of Howe and Ball's paper being on supporting school return, they did not include school staff in their sample. Whilst participants were working within specialist settings and will have had an in-depth knowledge of the needs of the children they were working with, other than the EP, many are likely to have had limited knowledge and experience of the opportunities and limitations of the school system. It may also be that those from outside the EP profession have a reduced awareness of the role and scope of EPs working within LA services. It would have been interesting to have had the perspective of school staff, to consider if the support they felt they required when reintegrating a child, aligned with what the participants in this research felt schools needed in terms of support from an EP.

Linden et al. (2013) used a postal survey, in one region of the UK to investigate the level of understanding of brain injury, among school based educational professionals. A total of 388 participants, (principals, pastoral care and Special Educational Needs Co-Ordinators [SENCo's] from 388 schools), completed an adapted version of the common misconceptions about traumatic brain injury questionnaire (CM-TBI) (Springer et al., 1997). This is a self-report questionnaire containing a total of 40 items pertaining to the domains of seatbelts/prevention, brain damage, brain injury sequelae, unconsciousness, amnesia, recovery and rehabilitation. Participants were asked to identify to which extent, using a five point Likert scale, they assessed the statement to be true. Respondents were also asked to indicate if they knew someone with a brain injury, had taught someone with a brain injury or had received training on brain injury, in order that the effects of knowledge (measured by knowing someone), experience (measured by teaching someone) and training could be tested for in the analysis.

Those who knew, or had taught someone with a brain injury were found to have greater understanding of the condition, as did those who had received training. When considering the data in more detail participants who had no knowledge or experience scored higher for the domain of unconsciousness. It might be that school staff have little involvement with pupils during their period of reduced consciousness, particularly for children who require an extended inpatient stay in hospital. As such, knowledge and experience may not act as a mediating factor for this domain and the difference, as not statistically significant, may be down to chance.

Linden et al. (2013) conclude that their research suggests that educators are not well informed about the prevalence and consequences of childhood brain injury and that many misconceptions remain. Throughout their paper, Linden et al. (2013) use the term ‘brain injury’ to describe the phenomenon they are exploring. However, it is important to remember that the tool they used to assess professionals knowledge and understanding was the CM-TBI, which includes some domains that are specific to TBI (e.g. seatbelt use) and thus, perhaps not representative of ABI more broadly. Furthermore, it is unclear from the research paper whether participants were asked about knowing someone or having taught someone with a brain injury more broadly or if they were specifically asked about TBI, and provided with information on the distinction.

In 2017, Howe used an online questionnaire to investigate SENCos’ knowledge of the educational implications of childhood ABI. The questionnaire was adapted from that used by Linden et al. and reduced to 13 questions; those considered most pertinent to the knowledge that would be helpful for SENCos working with CYP with ABI to know. A five point rating scale was used and the impact of experience working with pupils with a brain injury and access to additional training were considered. A total of 55 responses were received, mostly from school SENCos.

Results revealed high levels of uncertainty regarding the impact of brain injury in childhood, although, perhaps reassuringly, participants demonstrated increased confidence and greater knowledge in response to questions that were more directly linked to learning and the long term impact on learning and behaviour.

The majority of respondents had no experience working with a child with an ABI, but those who had, demonstrated significantly higher levels of knowledge. Similarly to Linden et al. (2013) the difference in knowledge between those who had received training and those who had not, was not significant and the number of participants who had received training was low. The type of training accessed varied, but just five participants had received training from an outside professional. The most frequently accessed source of training was ‘own research’, suggesting that avenues for training in this area are limited resulting in the need to take this up independently if required.

Despite reducing the CM-TBI to the 13 questions deemed most pertinent to the knowledge helpful for SENCo’s, Howe’s research found that SENCo knowledge remains inconsistent and impacted by ongoing misconceptions, (this finding was consistent with that of Linden et al., 2013). Howe concludes by suggesting that specialist training for school staff on the educational impact of childhood ABI is required. This suggests that despite the similar recommendations being made by Linden et al. (2013) several years previous, it had not been taken up and remained relevant. Howe (2017) does not suggest where this training might be available or who might be best placed to provide it, and despite being an EP, the author makes no mention of the EP role.

Bate et al. (2021) used semi structured interviews, with SENCos and classroom practitioners, from mainstream primary and secondary schools, to explore their experiences of facilitating the return and reintegration of a child following a severe ABI. They also explored participants experiences of working within the SEND CoP whilst facilitating the return.

To be eligible to take part in the study participants needed to have facilitated the return to school for a child for whom the following applied:

- received neuro rehabilitation from one centre in the UK;
- sustained a severe ABI that required more than 28 days in hospital;
- be returning to a mainstream state school;
- have returned to mainstream education six to eighteen months prior to the planned data collection period;
- parents had provided written consent for the educators at the rehabilitation centre to maintain communication with the educators at the school regarding the child’s educational progress and support needs, after the child returned to school.

Five SENCos, four classroom practitioners and one educator in a pastoral role, from across three primary and two secondary schools took part. The children being supported ranged in age from national curriculum year three to seven.

Data was compared between participants from the same schools and across schools. Between participant data revealed that SENCo’s engaged in more interaction with parents, whereas classroom practitioners supported the child at greater length. Four main themes arose from the interviews;

1) Intensive, never ending problem solving
2) Continual adaption
3) Emotional challenges
4) Battling SEND processes

Despite the fact that children had returned to school a minimum of six months prior to the interview taking place, participants described ongoing, unresolved longer-term issues that they were continuing to problem solve. In particular, all participants mentioned communication and social interaction difficulties.

Participants sought advice from a range of professionals and spoke positively about receiving guidance that was specific to the individual pupils current challenges. However, there was some frustration expressed at the challenges in sourcing professionals locally with the appropriate levels of expertise.

Participants described the need to engage in emotionally demanding conversations with parents, particularly when needing to communicate a change to a pupil's cognitive ability post injury. Additionally, the challenge of observing and supporting the predominantly negative emotional responses of the children was raised by all participants as a challenge. Uncertainty about how to respond was a common feeling and despite referrals to child and adolescent mental health services classroom practitioners continued to need to respond to emotional dysregulation.

Finally, most participants found statutory SEND processes to be inappropriate and unresponsive to meeting the needs of children whose needs had changed suddenly. They described their interactions with the LA as a 'fight' and felt that statutory documents did not keep pace with the physical, cognitive and psychological changes in the child.

Bate et al. (2021) suggest their findings indicate a need for a range of changes to the way in which children with ABI are supported in their return to school. Firstly, they suggest the need for resources focusing on how to support and respond appropriately to children's mental health and emotional needs. Secondly, they suggest the need for educator training. Finally, they suggest that their evidence provides support for changes to be made to the SEND CoP to meet the need of children with ABI.

The severe nature of the ABI sustained by the focus children in this research and the fact that they had received neurorehabilitation from a specialist centre, likely means that they had a wider support network available to them than children who may have sustained a less severe injury. As such, the support available to the participants in this study, may not be reflective of that available to educators more generally when supporting children who have sustained a less severe injury.

Bennett et al. (2022) used a 45-item survey, including the adapted version of the CB-TBI (Linden et al., 2013) used by Howe (2017) to explore SENCos' knowledge of childhood ABI and any experience or training they had, that enabled them to effectively support CYP with ABI in school. A total of 54 SENCos from one LA completed the survey and the results were compared with those found by Howe (2017). The researchers hoped that they would be able to identify what an effective training programme on childhood ABI should incorporate, by obtaining a greater understanding of the current strategies used by SENCo's.

Similarly to Howe (2017), Bennett et al. (2022) found that SENCos held numerous uncertainties about childhood ABI. In particular, there were low levels of certainty in response to questions regarding the trajectory of ABI recovery by age of injury, the involvement of schools in discharge planning meetings, the proportion of injury by severity and whether or not the LA keeps a record of children who have sustained ABI. Despite these uncertainties, participants demonstrated significantly greater knowledge when compared with the participants in Howe (2017) in relation to the effects of ABI on childhood development and regarding whether or not head teachers were informed about pupils with ABI. Higher rates of participants had also accessed training. Whilst the source of training was not explored, it may have been that it was of a higher quality and provided by a professional with knowledge, experience and interest in the field, thus enhancing respondents' certainty, in comparison to the participants of the previous research.

Whilst this paper broadens the understanding of the knowledge of SENCos by means of replicating the research conducted by Howe (2017), the inclusion of SENCo's only means that any understanding held within the wider school community will not have been captured. Therefore, training needs cannot be generalised to all teaching staff. It may be that teaching staff have more experience due to the nature of their role being more classroom based and thus their inclusion would alter the findings. Additionally, the response rate (40%) means that results may have differed had all the available sample responded.

In 2023, Renton used a mixed methods design to explore the EP role in supporting children following ABI. One hundred LA EPs took part in a nationwide (UK) survey exploring the views, experiences and practices of working with children post ABI. Participants were asked 23 questions pertaining to prevalence of ABI in their work, current practices, attitudes, knowledge and confidence. The purpose was to explore if suggestions from previous research have been implemented and what the barriers to providing support might be. Phase two of the research explored what participants considered to be good practice when supporting CYP with ABI in their role. Two focus groups, each with two participants were carried out. Participants were asked to think about their work in this area, how their involvement had made a difference to the situation/support, what it (the work) involved, how it helped and what the outcome was.

The findings revealed that whilst most participants had supported a CYP with an ABI, they believed the prevalence of CYP with ABI in education to be uncommon or rare. Participants were involved with CYP in a range of ways, including: EHCNA's, consultation, attending a 'return to school meeting' being part of the multi-disciplinary team (MDT), interpreting medical reports, delivering training to schools, attending annual reviews, carrying out assessment and intervention and signposting. EPs felt that they had something unique to offer when engaging with this work although what they thought this was, was not explicitly explored. The overarching theme identified in relation to the role of the EP when working with CYP with ABI was a utilisation of existing skills and applying them to offer systemic and holistic support. A number of barriers to the provision of support were also identified. These included: hidden disability, awareness of the EP support, ABI knowledge among school staff, occurrence within EP practise, capacity and time, lack of EP involvement within the MDT, grief, loss and trauma and knowledge and confidence among EPs.

Perhaps due to the limited published research in the EP arena on ABI, Renton (2023) attempted to answer a total of six research questions. Whilst this has provided a breadth of information otherwise not available, it does limited the depth to which each question can be answered. The researcher also describes their rationale for using focus groups rather than interviews as the ability for participants to elaborate on each other's answers. However, despite having just four participants for the second phase, they decided to proceed with two focus groups rather than one. It may have been that combining participants and conducting one focus group would have further enriched the findings and the rational for not doing this is not clear.

2.4 What do we know about how schools are supporting children with ABI and where they are drawing support from?

A key theme which emerged from the literature considered in this review was how and by whom the child's brain injury was communicated to school staff. Just two thirds of the teachers in Hawley et al.'s (2004) sample had been made aware of the injury, with 21 teachers reporting that the school had not been informed. For those children where the school had been made aware, this information was not always passed on when the child moved schools and five parents reported that teachers within their child's current school were unaware. Whilst Linden et al. (2013) and Howe (2017) did not ask about communication specifically, the number of respondents indicating that they had experience of working with a child with an ABI, given its prevalence, suggests that teachers are likely to have taught, or known a pupil with an ABI but been unaware of the injury. The majority of respondents in Linden et al. (2013) had more than 21 years teaching experience, yet just over a third reported experience teaching a child with an ABI. Similar proportions were found by Howe (2017). This suggests that, despite the time lapse between the pieces of research, and the advances in detection and understanding of brain injury during that period, little has changed in the way information is shared with school staff. Renton's (2023) findings suggest a similar picture among EPs. Despite most EPs having nine or more years' experience, the most common belief was that ABI among CYP in school is uncommon or rare, suggesting they are unaware of the prevalence and it is not reflected in their work.

Whilst some areas of the country have dedicated multi professional teams responsible for coordinating support for children with ABI (Bozic & Morris, 2005), there appears not to be a nationally, or even locally, agreed process or system in place for communicating to school staff when a child has sustained an ABI. Just 2% of participants in Renton's (2023) research reported the presence of a service protocol. Whilst this remains the case, it is likely that support for children will be inconsistent. If teachers are not aware that they are teaching children with ABI then they may not be aware what support is required and where best to source this. Furthermore, there is no nationally agreed system for recording ABI which means that unless the school bring the child to the attention of the LA (including the EPS), the LA will also remain unaware of which children are affected. It is perhaps therefore unsurprising that Howe and Ball (2013) suggest that there is a need to improve communication between professionals, particularly upon a CYPs hospital discharge.

Where schools have been made aware of a child's injury, effective support appears to involve a multi-agency, holistic approach. School staff reported being provided with advice by a range of professionals from several disciplines, including Speech and Language Therapists, Occupational Therapists, ABI specialist teachers, specialist psychologists and ABI charity representatives (Bate et al., 2021). Collaboration tended to take the form of joint meetings, often including, the parents and children (in addition to the aforementioned) and focused around reintegration plans (Bate et al., 2021) and statutory processes (Bennett et al., 2022). Whilst some EPs in Renton's (2023) research reported attending 'return to school' meetings a barrier to effective EP support was lack of involvement within the MDT. It may be that the role of the EP is not well understood by the wider MDT and that EP support is considered to fall within the remit of statutory processes, as a vehicle to additional funding.

Teachers who had been involved in MDT meetings reported gaining in confidence, developing relationships with parents, and forming expectations of the child's abilities and support needs (Bate et al., 2021). It is however worth noting that many of the children at the centre of the research had sustained a severe ABI and therefore the support available to them, including the range of professionals this was provided by, is likely not to be reflective of that which is available to those who have sustained a less severe injury.

Training for school staff was also a theme among the literature, although this was not always found to be timely and effective, and the sources of training varied. EPs within Renton's (2023) research reported delivering training to schools as part of their role, however the percentage of respondents reporting this is not given. Comparative to the numbers of teachers who have taught a pupil with an ABI, the number of those who have received training on the topic remains low (Bennett et al., 2022; Howe, 2017; Linden et al., 2013). However, this has increased over time, with the higher figures being reported in the most recent research. Respondents who had accessed training demonstrated increased levels of understanding regarding brain injury, compared with those who had not, however this did not reach statistical significance (Howe, 2017; Linden et al., 2013).

Sources of training that had been accessed varied. Across Linden et al. (2013) and Howe (2017) speaking with a clinician, EP or brain injury charity and information provided by a hospital or learnt in a previous job role were described by SENCo's. However, perhaps the most noteworthy was that most participants cited 'own research, e.g. reading, internet' as the source of their training (Howe, 2017). It appears that avenues for training in this area are limited and teachers are left needing to seek out training as a means of reaction when a child with a brain injury joins their class. No SENCo from Bennett et al. (2022) reported receiving input on childhood ABI as part of their initial training. This is perhaps unsurprising given the learning outcomes detailed in the National Award for SEN Co-ordination (DfE, 2024), which links professional knowledge and understanding requirements to the SEND Code of Practice (DfE, 2015) which, as previously mentioned makes just one reference to ABI.

SENCos reported finding it difficult to source professionals locally with adequate levels of expertise to support them with the challenges the children were facing (Bate et al., 2021). Forty percent of those surveyed reported receiving no help from other professionals in preparing for the CYPs reintegration back to school (Bennett et al., 2022). A lack of, or delay to training was cited as the most common barrier to supporting CYP with an ABI (Bennett et al., 2022) and thirty five percent of respondents claimed that they were aware of a pupil who had unmet needs as a result of this (Bennett et al., 2022).

It is perhaps unsurprising that much of the literature concludes by making suggestions for changes in the training of childhood ABI that is provided to school staff. Linden et al. (2013), suggest a more formalised approach be taken, which includes input both on the initial teacher training programme and as part of ongoing CPD. In addition to this Bennett et al. (2022) propose inclusion within the national award for special educational needs co-ordination training programme, which all SENCos must complete within three years of appointment. Suggestions for training content include; background and effects of ABI, strategies for supporting in the classroom, resources available, case studies (Bennett et al., 2022), raising awareness of the changing needs of children with ABI (Howe & Ball, 2013) and making links between teachers prior knowledge of SEND and where this could be applied (Bate et al., 2021).

In addition to the barriers to accessing appropriate professionals with relevant knowledge and experience of ABI and the lack of training that appears to be being provided to schools, difficulties accessing funding was also reported (Bate et al., 2021). Sixty percent of those who had worked with a child with an ABI found it ‘difficult’ or ‘really difficult’ to gain access to additional funding[1] in order for them to implement appropriate support for the child (Bennett et al., 2022).

It appears that good quality, timely training delivered by an appropriate professional is scarcely available and in the absence of this, the training that school staff have undertaken has done little to increase their knowledge in the area of childhood ABI. To what extent therefore, does prior experience of ABI compensate for this lack of training and support school staff when working with children? Whilst prior experience was not commonplace, participants who knew or who had taught someone with an ABI demonstrated significantly increased knowledge and understanding of the condition, when compared with those who had no experience (Howe, 2017; Howe & Ball, 2013 & Linden et al., 2013) suggesting a need to “learn as they went” (Bate et al., 2021). School staff tended to draw ideas from their broader experience and commented to parallels they had noticed with other neurodevelopmental disorders such as Autism Spectrum Condition (ASD) and Attention Deficit Hyperactivity Disorder (ADHD) (Bate et al., 2021; Bennett et al., 2022).

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[1] Bennett et al. (2022) do not expand on which type of funding, therefore this could be through EHCPs or otherwise.

Considering together the training and experience of school staff when supporting CYP with ABI, its seemingly reactive approach and the overreliance on teachers' prior experience for informing their knowledge and understanding, it appears that children are experiencing somewhat of a postcode lottery when it comes to the support that they are likely to receive. Should they be lucky enough to be in a class where the teacher has taught a CYP with ABI previously, they may be well understood, supported and adaptions made. However, with each change in teacher the child rejoins the roulette wheel of variable experience and potentially risks having to start over, time and time again.

2.5 How are Educational Psychologists supporting children in school with acquired brain injury?

Perhaps the most stark finding of this review was the distinct lack of mention of the EP role. Either through the inclusion of EPs as participants or by mention of the role by school staff as part of an MDT around the child. Just one paper has been published specifically for an EP audience[2] (Ball & Howe, 2013) in the last 20 years. This is despite LA EP services being described as a 'key agency' in supporting children with ABI needs (Ball & Howe, 2013). A recent, so far unpublished thesis (Renton, 2023), has explored the EP role in working with CYP with ABI, which describes a range of ways in which EPs have supported children. However, the most common method of support was through the EHCNA process (58%), which perhaps reflects the EP role more broadly given the current statutory demands.

Training is a key function of the EP role (BPS, 2023; HCPC, 2023) and it is felt that EPs could be most effective in providing support through the development and delivery of staff training (Ball & Howe,

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[2] Within either the BPS or AEP published journals.

2013). Whilst the EP was referred to in Linden et al. (2013) as a clinician whom the teacher had engaged with regarding a specific child, in more recent research from Bate et al. (2021) the EP was not mentioned by participants as a profession from whom they had sought, or who had provided support. There is however, in more recent years, perhaps a greater level of disparity regarding what EP services are offering free to schools, with the introduction of the traded model (Lee & Woods, 2017) and the rise in statutory demand (Gov.uk, 2023). This could be contributing a postcode lottery of support for pupils with ABI. Additionally, in contrast to the findings of Bate et al. (2021), Bennett (2022) found that 60% of respondents who had worked with a child with an ABI had received help from other professionals and EPs were named among those who were often involved in the reintegration process. The disparity of findings across these two pieces of research may be a result of an established pathway in the LA where the research took place, which highlights the need for training of school staff (Nottinghamshire County Council, 2017), and suggests that this has been an area of focus for the LA, with established protocols in place. Whilst most EPs in Renton's (2023) research reported providing support of some kind to CYP with ABI one of the themes identified as a barrier to meeting the needs of CYP with ABI was EP knowledge and confidence.

2.6 What do we know about EPs working with children with ABI?

There is very little in the published research regarding the work that EPs are undertaking with CYP with ABI. The fact that there are currently no nationally established protocols for communication between health care, education settings and LA's means that schools are not always aware of the children who have sustained an ABI and thus may not be passing this information on to EP services. This led Howe and Ball (2013), to suggest that established protocols for information sharing are required. However, despite this recommendation being made some 10 years ago, it does not appear to have been widely taken up by services. Perhaps this may be a reflection of a lack of knowledge, experience and confidence within the EP profession for providing this support?

Ball and Howe (2013) also suggested that there should be an EP with specialist knowledge in neuropsychology and brain injury within each LA service. The findings from Bozic and Morris (2005) revealed that just 4.3% of EPs held this specialist responsibility. This rose to 7% in Renton (2023), suggesting and increase over time but it certainly remains the case that not all LA EP services have specialist roles in this area. Perhaps this is reflective of the concerns raised by Ball and Howe (2013) regarding the level of input EPs receive in this area, remaining relevant.

Just three of the papers reviewed here have been published since the introduction of the current SEND Code of Practice (DfE, 2015), which emphasises a more joined up approach between education, health and care. All of these papers focus on the knowledge, views and experiences of school SENCos and therefore the voice of the EP is significantly lacking in the current published literature.

2.7 Rationale for this research

This literature review highlighted a significant lack of published papers on childhood ABI in the field of Educational Psychology. Just one paper utilised a sample of EPs exclusively and dates back to before the current training programme (Bozic & Morris, 2005). Only one paper has been published in a journal targeted at EPs in the UK (Ball & Howe, 2013).

Despite all schools within the UK having access to an EP service, the papers that focused on eliciting the views of school staff (Linden 2012; Howe, 2017; Bate et al., 2021; Bennett et al., 2022) made little mention of the EP role, and where EPs were included in the participant sample these tended to be those based in a more specialist setting (Howe, 2017). The recent research by Renton (2023) broadens the scope of the literature in this area by utilising a nationwide sample of LA EPs, and it is hoped that the author will seek to publish their findings imminently.

Despite the apparent need for EPs to be more involved in supporting children with an ABI there is very limited literature published in this area. There is a distinct lack of EP voice represented and where this is captured, it suggests that EPs feel underconfident and lacking in training to support schools. It is not clear how often EPs are required to undertake work with children with an ABI and what factors contribute to their confidence levels when working in this area.

Whilst a more recent unpublished thesis (Renton, 2023) has explored the EP role in supporting children with ABI, the breadth of research questions did not allow for a greater depth exploration of confidence. According to the American Psychological Association (APA) Dictionary of Psychology self-confidence refers to a “belief that one is capable of successfully meeting the demands of the task” (2018b). Renton’s findings do suggest that EP knowledge and confidence are a barrier to meeting the needs of CYP with ABI and therefore a deeper exploration of confidence is of value.

3. Methodology

3.1 Chapter overview

This chapter outlines the aims and purpose of this research, including providing a detailed account of the research process that has been followed and the rationale and justification for the decisions made. Once read, the reader should have a clear understanding of how and why the research was carried out. The detail should be sufficient to enable the reader to accurately replicate the research, should they wish. Information regarding theoretical positioning, methods, recruitment, participants and analysis is provided along with ethical considerations.

3.2 Research aims and purpose

This research seeks to examine the national landscape regarding work that EPs are doing with CYP with ABI and how confident they feel when undertaking this work. It also identifies the factors that contribute to levels of EP confidence.

As highlighted through the literature review, no research has been identified that has examined the work EPs are doing to support children with ABI, or how prevalent this is for EP practice. Whilst the limited literature that does exist points to EPs being under confident in this area, this information has not been quantified. This research is designed to fill that gap. Furthermore, identifying the factors that contribute to confidence levels will provide information that can used by both EP services and training providers regarding steps that could be taken to support EPs with this. The ultimate aim being that children with ABI are better understood and supported by the adults working with them.

3.3 The research questions

The following research questions were derived in order to fulfil the aims of the research:

1) What work do EPs undertake with children and young people (CYP) with ABI?

2) How confident do EPs feel when working with children and young people with ABI?

3) What factors support EPs to feel more confident when working with children with ABI?

3.4 Theoretical positioning

3.4.1 Ontology

Ontology refers to a philosophical position regarding “what exists in the human world that we can acquire knowledge about” (Moon & Blackburn, 2014). There are various positions that can be taken which span a continuum; at one end is the assumption that a form of objective reality exists, the other posits there is no reality beyond individual/s subjective experience. The terminology used to describe the different positions along the spectrum varies among the literature (e.g. Hathcoat et al., 2019; Moon & Blackman, 2014; Snape & Spencer, 2003).

Historically these polar positionings may have been used to distinguish between the natural and social sciences (Trivedi, 2020). However, researchers of various disciplines can take a range of ontological positions. A researcher’s ontological position may change depending on the entity being studied and the same entity can be studied from different ontological positions, depending on the purpose of the research (e.g. descriptive/exploratory/explanatory etc).

3.4.2 Epistemology

Epistemology is described as the "nature of the relationship between the knower or would be knower and what can be known" (Guba & Lincoln, 1994). The way in which we seek to establish a new reality, or knowledge, is intrinsically linked to how we have defined the reality we seek to reveal (our ontological positioning). Those who believe in the existence of an objectivity reality may seek facts through the application of scientific experimental approaches aligned with a positivist epistemology. In contrast, those who believe in a subjective reality through experience, are likely to seek to acquire knowledge through a constructivist epistemological stance using methods that elicit information regarding a subject's unique experiences.

3.4.3 Researcher positioning

The relationship between ontology, epistemology, methodology and research purpose, requires an element of lateral thinking from the researcher, who must ensure that each decision is compatible with the next and is well aligned with the research questions posed.

This research will be carried out from a critical realist ontological and epistemological position. Critical realism is a relatively new paradigm that rejects the polarised notions of realism and relativism and instead uses approaches from across the philosophical spectrum to provide a more thorough account of ontology and epistemology (Fleetwood et al., 2002; Gorski, 2013). Critical realist ontology holds that there is a real-world truth, independent from perception (Wynn & Williams, 2012) however, the multidimensional nature of the systems within which the reality exists means that this reality may be obscured, unobservable or latent (Mcevoy & Richards, 2003). When developing knowledge within this paradigm there is a requirement to consider both the independent structures and the subjective information of participants and their contexts (Sayer, 2010).

Critical realism is well aligned with the mixed methods design of this research (Mukumbang, 2021; Sobh & Perry, 2006). The questions that this research seeks to answer hold that there is a material, subjective reality about brain injury. The positivist approach of the quantitative phase of the research allows for the collection of data considered objective, such as context and previous experience, with the aim of identifying some tangible factors that are helpful and unhelpful in supporting EP confidence. The qualitative element of the research recognises that there is also a subjective element to experience (e.g. confidence) and this is not fixed; rather it will change over time and across contexts. The process of qualitative data collection through interviews, will allow for an explanation of the participants subjective experiences. This research position also recognises that it will be difficult to detangle the different contributing factors from each other in a way that enables identification of precisely what they are, as we cannot observe one factor distinctly from another.

When considering the theoretical positioning of this research the researcher considered their own experiences of brain injury and confidence and how this was well aligned with a critical realist position. See reflection overleaf:

The researcher and critical realism:

Throughout the many months spent visiting the neuro rehabilitation ward it appeared undeniable that ABI existed as an objective phenomenon that was measured using positivist approaches such as imagery and scales. My partner had a brain injury. However, it also became apparent to me that there was a subjective element to the response to this, both from the patients and their loved ones. Patients were recovering at different rates and the experience (including the emotional aspect) of being a patient and a carer was unique for each individual involved. Previous research had identified different factors that contribute to recovery likelihood including, (to name a few), severity of injury, age at injury and pre-injury cognitive levels. However, my partner's recovery exceeded all predictions which led me to wonder what was unique about his experience that could account for this.

I considered my own confidence as a carer; how this grew with time and how this was supported by previous experiences of caring. My access to research/reading, my general confidence, my cultural background and my new identity as a TEP were also reflected on.

Whilst these supporting factors may have been available, to varying degrees, to other carers, my utilisation of these factors was unique for me. I also reflected on the learning of ABI delivered throughout training and considered how my approach to working with CYP might differ from that of my fellow TEPs based on my experiences. Whilst all EPs can (and arguably should) work with CYP with ABI, how they go about this work and how confident they are with this is likely to be affected by their own reality. I have reflected on how important it will be to remain reflexive in my work in this area and to use supervision to reflect on how my experiences might be impacting the work. It will be important that I am mindful to self-monitor the extent to which I bring my own experience to the role and ensure that this does not impact the extent to which I remain curious of the lived experiences of others.

My understanding of both ABI and confidence as developed through my personal experiences appeared well aligned with the critical realist position taken within this research.

3.5 Research design

This research employed an explanatory sequential mixed methods design (Creswell, 2009; Creswell & Plano Clark, 2018). Within this approach the two phases of the research are distinct from one another with the qualitative phase following on from the quantitative. This allows for a more enriched understanding of the problem in which the qualitative data is used to explain the initial set of results, found through the quantitative phase, (Creswell & Plano-Clark, 2018). Typically, and within this research, the initial (quantitative) phase involves a higher number of participants than the second (qualitative) phase.

This approach was decided upon as it had been intended that specific findings from the quantitative phase could be further explored during the qualitative phase. Unfortunately, the low response rate to phase one of the research meant that it was not possible to complete statistical analysis on the quantitative data and thus identify factors for further exploration. The variant of design utilised therefore was what Creswell and Plano-Clark (2007) refer to as the 'participation selection model'. In this model the purpose of the quantitative phase is primarily the identification and purposeful selection of participants for phase two and greater weight is placed on the qualitative data.

Mixed methods research has become particularly popular in the fields of education and psychology over the last few years (Molina-Azorin, 2016). The integration of both quantitative and qualitative methods is said to provide a better understanding of the research problem, than when a single method is used (Creswell & Plano Clark, 2018; Timans et al., 2019;) and it allows the strengths of one approach to compliment the limitations of the other (Tasjakkori & Newman, 2010). Different types of questions can be incorporated within a single study (Wasti et al., 2022) and the overall research question can be studied from different research perspectives (Regnault et al., 2018).

Whilst there are numerous benefits to taking a mixed methods approach there are also a number of challenges. Most commonly identified within the literature are the following: resources required (including financial), time, skills, interpretation of the data and the volume of work required (Bryman, 2007; Dawadi et al., 2021; Hughes, 2016; Molina-Azorin, 2016; Regnault et al., 2018; Wasti et al., 2022; & Zhou & Wu, 2020). Consideration was given to all of the aforementioned, before a mixed methods approach was decided upon. The volume of work and time required was planned for during the research proposal stage. A calendar of research activities chart was completed for the purpose of allocating time to each phase of the research and to support the researcher to remain within the timeframe available. The resources required to complete the research were not such that financial consideration need be given, and access to software was provided by the researcher's university. Finally, having completed quantitative data collection and analysis previously, the researcher has prior experience which supported efficiency within this research.

A final challenge for mixed methods research is the identification of a suitable theoretical paradigm that aligns with both approaches used (McChesney & Aldridge, 2019). Overall, the mixed methods design of this research fits well with the critical realist epistemological approach taken (Zachariadis et al., 2013).

3.6 Participants

3.6.1 Inclusion/exclusion criteria

To take part in this research participants were required to have completed their EP qualification and be working within the role in Great Britain. This could include within the context of LA employment, NHS and private practice. The rationale for this was that it was felt that EPs working outside of the

LA context could bring unique experiences that add value to the description of factors that contribute to confidence.

EPs working outside of Great Britain were excluded from participation due to the variation in both training and practice internationally. Trainee EPs (TEPs) were also excluded as it was considered that the range of experiences required to meet the BPS standards for accreditation may skew the sample; TEPs often explicitly seek particular opportunities in order to fulfil specific competencies during their training, thus their experiences may not reflect the scope of work arising authentically to qualified EPs in different settings.

3.6.2 Recruitment

Phase 1 (quantitative): The aim of this phase of the research was to gather data representative of the EP profession and therefore no limit was placed on the number of participants. The following range of recruitment strategies were employed:

- Advertisement (appendix C) on the Educational Psychology Network (EPNET), Facebook (including on the researcher's profile and within a closed group entitled 'Educational Psychology – UK Doctoral Applicants') and Twitter.
- Advertisement through the AEP on their weekly update email.
- Fellow trainees were asked to share the details of the research with colleagues within their placement LAs.
- Details were shared within the researcher's own placement LA.

- Following several failed attempts to contact the National Association of Educational Psychologists (NAPEP) email forum, the researcher's placement PEPs agreed to email NAPEP on the researchers behalf.
- Snowball sampling.

A total of 43 complete responses were received in the quantitative phase. See table 3 for participant details.

Phase 2 (qualitative): Following completion of phase one of the research, participants were asked to indicate if they would be willing to take part in a follow up interview. Those willing were asked to provide their contact details. Twenty-three participants expressed an interest at this stage. Participants were then purposefully selected using the following procedure:

Each participant was assigned a total confidence score, derived by converting to a numerical value, and adding together, their responses to phase one of the research pertaining to their confidence in consultation, intervention, assessment and training. Responses were converted as per the following:

- Not confident = 0
- A little confident = 1
- Somewhat confident = 2
- Confident = 3
- Highly confident = 4

The ten participants with the overall highest confidence scores were contacted by email to establish if taking part in an interview was still something they were interested in.

Following the completion of phase one it was decided that those participants who were most confident would be able to provide the richest detail regarding the factors that supported their confidence and that interviewing participants who lacked confidence may result in less information and thus may be less insightful.

Ten participants were contacted for the following reasons:

- Braun and Clarke (2013) recommend the use of six-ten participants for a small thematic analysis project[3].
- There was a difference in confidence score between the 10th and 11th most confident participants and thus it appeared a logical place to differentiate.

A total of seven interviews were completed.

3.6.3 Sample

Phase 1 (quantitative): Information regarding the participant sample for phase one of the research can be found in Table 3. Of the 43 participants that completed the questionnaire, eight completed their initial EP training prior to the introduction of the Doctoral training programme in 2006 and thus obtained a master’s level qualification. Participants had been practising for a mean average of 8.79 years, with length of practise ranging from one year to 43 years.

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[3] Whilst Braun & Clarke (2013) increase this number to 10-20 for UK Professional Doctorate research, the smaller number will be adhered to, on the basis of this being a mixed method study.

Table 3:

Details of participants recruited in phase 1 (quantitative)

No. of participants							
Additional qualifications in neuropsychology		Worked in a specialist setting for CYP with ABI		Current employment[4]			
Yes	No	Yes	No	LA	Working independently	NHS/clinical setting for CYP with ABI	other
5	38	10	33	33	8	4	3

Phase 2 (qualitative): A summary of recruited participants for the qualitative phase of the research can be found at Table 4 below. Participants had an overall confidence score ranging between 12 and 16 out of a possible 16.

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[4] Where participants indicated more than one type of employment they appear in more than one category, hence the numbers equate to more than the total sample size.

Table 4:

Summary of participants for phase 2 (qualitative)

Participant	No. of years practising	Route of training	Current employment	Additional neuropsychological qualifications	Worked in a specialist setting that specialises in support CYP with ABI
1	22	Masters	Independent	No	Yes
2	20	Masters	Independent	Yes	Yes
3	3	Doctorate	Independent & NHS/clinical setting[5]	Yes	Yes
4	7	Doctorate	Local authority	No	No
5	14	Doctorate	Independent & NHS/Clinical setting	Yes	Yes
6	10	Doctorate	Works for a multi academy trust	Yes	No

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[5] NHS/clinical setting (for both participant 3 and 5) was with CYP with ABI.

7	5	Doctorate	Local Authority & Private practice[6]	No	Yes

3.7 Data collection

3.7.1 Phase 1 (Quantitative)

The purpose of this phase of the research was to examine the work that EPs are doing with CYP with ABI and how confident they are when undertaking this work. It was decided that administering a survey would be the most efficient way to collect this data as this enables participants to provide information through responding to a series of questions (Check & Schutt, 2012).

Survey use is popular in psychological research (Singleton & Straits, 2009) and online administration has become one of the most popular methods (Qualtrics, 2024b). Advantages to collecting data via an online survey include the ease of access to large populations from across vast geographical areas, quick response time, reduction in resource requirements and time efficiency (Jones et al., 2013). Furthermore, online software has streamlined the design process (Alessi & Martin, 2010). By utilizing certain functions such as ‘skip logic’ and ‘display logic’ the researcher could ensure that relevant questions were displayed in accordance with the participants response to the previous question, making the process simpler for the respondent. For example, when participants answered, ‘yes’ in response to

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[6] Private practice for participant 9 was for an organisation who provide neurorehabilitation for CYP with ABI.

the question ‘during the course of your training, were you delivered teaching on ABI?’ they were presented with a follow up question about the amount of teaching they received. This follow up question was not presented to participants who answered ‘no’ or ‘unsure’ to the initial question. There is also a ‘force response’ option which highlights to participants any questions that they have not answered. It does not allow participants to proceed if questions have not been responded to thus reducing the risk of missing responses.

Furthermore, the specific inclusion criteria for participation meant that an electronic survey could be shared in EP forums, thus targeting advertisement in spaces likely to reach the broadest range and number of possible respondents.

To ensure the quality of the survey a pilot was carried out. A psychology graduate not eligible for participation was asked to complete the survey, paying particular attention to the following:

- That questions were clear, concise and without spelling errors.
- That questions were presented in a logical order.
- That the relevant ‘skip’ and ‘display’ logics were set up and working correctly.

To ensure that all of the questions were relevant to answering the research question and that no unnecessary questions were asked, the rationale for each question was considered and recorded (see appendix D).

The survey was designed in the online platform Qualtrics, for which access was available through the University of Essex. This platform allows for distribution via a web link through which participants can self-administer. The participant information sheet (appendix E) and consent form (appendix F) were built into the survey. Following consent being provided participants were asked to provide demographic information including:

- Number of years practising.
- Route of initial training and institution.
- Amount of teaching provided on ABI during initial training.
- Current employment.
- Experience working with children with ABI (pre and post qualification).
- Additional qualifications in neuropsychology.
- Access to continued professional development (CPD) in ABI.
- The frequency of work with children with ABI.

These questions enabled the findings to be contextualized and for consideration to be given to the representativeness of the sample.

Participants were then asked whether they had completed consultation, intervention, assessment, training or ‘other’ work regarding a CYP with ABI and how confident they would feel should they be asked to undertake each of these different types of work. These types of work were specified as they are the core functions of the EP role (BPS, 2023).

Confidence levels were assessed using a five-point Likert scale (Likert, 1932) (not confident, a little confident, somewhat confident, confident, highly confident). A Likert scale is a rating system used in questionnaires to measure attitudes, opinions and perceptions (Jamieson, 2024). As self-confidence is “typically viewed as a positive attitude” (APA, 2018), a Likert scale was considered an appropriate measurement tool. Furthermore, Likert scales are frequently used in psychological and educational research (Cherry, 2023; Jamieson, 2024) as they are adaptable and easy to understand and analyse (Qualtrics, 2024a).

There is much literature regarding the advantages and disadvantages of including various numbers of response options when using Likert scales in research. Some suggest that five options increases psychometric precision (Simms et al., 2019). Providing an even number of response options forces the respondent to give an opinion, as no neutral or middle option is provided, whereas odd number response categories include a middle value (Losby & Wetmore, 2012). A five point scale was selected for this research. It was felt that the inclusion of a more neutral middle point was beneficial but the level of detail produced from a seven point scale was not required.

One of the limitations of Likert scale use is the lack of ability to interpret the participants response and determine factors that contributed to why they provided the rating that they did. For this reason, it is recommended that Likert scales be utilised alongside qualitative research methods (Qualtrics, 2024a), as is the case in this research.

At the end of the survey a participant debrief (appendix G) was provided and participants were asked if they would be interested in participating in a follow up interview, to explain the factors that contributed to their confidence scores.

3.7.2 Phase 2 (Qualitative)

The purpose of this phase of the research was to further explain the work that EPs are undertaking with CYP with ABI and the factors that contributed to the confidence scores provided in the questionnaire responses. Semi structured interviews were used to collect this data. The use of semi structured interviews enabled the researcher to collect more nuanced, contextualised and rich information, compared with that gathered through phase one. They allow participants the opportunity to describe why they gave the score they did and how they reached a position of such confidence.

Unlike structured interviews which utilise closed ended questions and follow a standardized format (McLeod, 2024), semi structured interviews permit an element of flexibility. This allowed the researcher to address particular topics, through the use of an interview schedule, consisting of a set of pre-prepared questions designed to be answered by all participants, whilst maintaining an element of flexibility that enabled the interviewee to add information and the interviewer to ask supplementary questions to ensure that sufficient detail was gathered (Creswell & Plano Clark, 2011). Semi structured interviews are the most commonly used interview type in psychological research (McLeod, 2024) and are considered useful for answering ‘what’ questions such as those in this research (McLeod, 2024). Furthermore, due to the qualitative nature of the analysis the level of structure provided by a structured interview was not required.

Additionally, semi structured interviews were chosen over unstructured interviews in an attempt to alleviate the risk of interviewer self-disclosure (Vondracek, 1969). Unstructured interviews follow an approach more akin to a conversation and do not use any set questions (Sanchez, 2014). The personal nature of this approach can often lend itself to data collection based on opinion and the researcher considered that they were wanting to interview participants in role as an EP and thus the relationship between interviewer and interviewee was a professional one. This was particularly pertinent given the researchers personal experience of the subject. It was felt that taking an unstructured approach may pose a challenge to the researcher in their requirement to remain in their researcher role. Should they not remain in role the risk of self-disclosure regarding their own thoughts, opinions and experiences would like increase, in turn influencing interviewee’s responses.

Despite being the most commonly used interview type (McLeod, 2024), semi structured interviews are not without their limitations. It is largely considered that semi-structured interviews are more time consuming to conduct than structured interviews and that they require a skilled interviewer in order to maximise their effectiveness (Jennings, 2005; McLeod, 2024; Mueller & Segal, 2015). The time taken was mitigated against by the virtual attendance, which also enabled the utilisation of technology to support the transcription, saving some time. Whilst the researcher was inexperienced in the use of interviewing they do have a range of transferable skills (such as those in consultation) that were considered to be sufficient to conduct interviews to an adequate standard for this research.

Another criticism of semi-structured interviews is the extent to which the data generated is shaped by the interview context, including the characteristics of the interviewer (Anyan, 2013). The use of reflexive thematic analysis (RTA) as the data analysis method negates this criticism, as "RTA approaches embrace researcher subjectivity as a resource for research" (Braun & Clarke, 2023). In order to support reflections regarding how the researcher might be influencing the findings a reflective diary was kept. See below for a reflection on the interviewing process:

Reflection on interviewing:

I was consciously aware, particularly going into the first interview, that my personal experience of brain injury made me curious about whether other EPs had personal experience that had aided their confidence. I was also aware of the concept of self-disclosure and wanted to avoid bringing any of my own experiences into the interview. For this reason I stuck quite rigidly to the interview transcript, particularly in the earlier interviews. I re-assured myself with the fact that participants had the debrief opportunity at the end of the interview and wondered if anyone would ask what had led me to research in this area. Some did, in which case I shared. I was secretly pleased that some participants had asked, although had no ill feeling towards those that did not.

The more interviews I conducted the more confident I became. I felt more confident in asking follow-up questions, which I was pleased with as I was keen to make the most of my participants' valuable time. However, I noticed in one interview in particular, that I asked follow up questions about role progression and role responsibilities. I wondered to what extent this was explicitly linked to the research questions and to what extent I had been lured in, by my own personal interest. I found myself, at times, slipping out of the role of researcher and into a position more akin to consultant. I realised that I was summarising what I had understood of what had been said and how this linked to my training in consultation. I wondered if this was a role more comfortable to me given how much practise I have had with consulting, compared with being a researcher.

One interview in particular required reflection. When the participant joined the interview, they had their camera turned off. I offered them the option to turn it on and they declined. I was surprised at this given I had specified interviews would be conducted on video conferencing software. I respected their decision and proceeded. As I moved through the interview I noticed I was finding it difficult to hear with clarity the responses that were being given. I found that I needed to repeat what I thought I had heard and seek confirmation. I wondered if the support of non-verbal cues and lip reading would have supported me, had the camera been on. I also noticed that the participant was answering the questions rather differently from the others I had interviewed thus far. Rather than feeling as though this enriched the data I noticed I felt a sense that it did not align with some initial theme development that already seemed to be forming in my mind. I wondered why I felt this way. Was I less interested in this participants response? If so, why? I considered aspects of my identity and those of my participant. I wanted to ensure that through the data analysis and reporting I represented the voices of all of my participants. By engaging with these reflections I hoped that I would not contribute a part in somehow silencing (or at least quietening) the voices of those from groups underrepresented in the EP profession.

Interviews were conducted using video conferencing software MS Teams. This provided greater flexibility for participant engagement and meant that participation was not restricted by geographical area. Additionally, it meant no additional time or cost for either participants or the researcher. There was no requirement to travel to an in person interview location and it was not necessary to secure a confidential meeting space.

A mutually agreed date and time was decided upon, via email, between the researcher and each participant. Once confirmed the researcher emailed each participant a unique Teams meeting link. The researcher kept their camera on throughout the duration of each interview. Six out of the seven participants also used the video function. One participant elected to engage in the interview with their camera turned off.

The researcher conducted each of the interviews from a room in their home, at a time the house was vacant of others. Participants were notified of this at the beginning of the interview in order that they were aware that their confidentiality was protected.

The interviewer used an interview schedule (appendix H) to ensure consistency across participants. The interview schedule contained some key information from the participant information sheet (appendix H) which was read to the participants. Participants had an opportunity to ask any questions before being asked to confirm that they were happy to continue. At this point the recording commenced. Recording was conducted using the software inbuilt into MS Teams.

Once participants agreed that they had said everything they wished to say they were advised that the recording would be stopped. Following the ending of the recording participants were offered an opportunity to ask any questions or discuss further any points raised outside of the data collection process. Participants were then read some key information from the participant de-brief sheet, as per the content of the interview schedule (appendix H).

Interviews were carried out between 30th October 2023 and 14th December 2023. A maximum of two interviews were carried out on the same day with a minimum of 45 minutes between each. Interviews were dispersed in this way to allow the researcher sufficient time to debrief with each participant, to ensure that participants were not rushed out of the interview and to allow the researcher a chance to de-brief themselves, in the form of peer supervision, should this be required. This was particularly relevant given the sensitive nature of the topic and the researchers closeness to it, as it was considered possible that conversations and content may be triggering for both participants and the researcher.

Interviews lasted in length between 21 and 34 minutes exclusive of the introductions, information sheet and debrief not included in the recordings.

Participants who expressed an interest in taking part in phase two of the research but who were not invited to interview, were contacted via email in February 2024. They were advised that the data collection phase of the research was complete and that the researcher was beginning data analysis. Participants were thanked for their time and support.

3.8 Data analysis

3.8.1 Phase 1 (Quantitative)

The survey data was analysed using descriptive statistics to outline the landscape within which EPs are currently working and how confident they are when undertaking a range of work with CYP with ABI.

It had initially been hoped that the survey would attract more responses in order that the results were representative of the EP profession nationally. Had this been the case further statistical analysis may have been completed on the data elicited from the survey. Consideration would have been given to factors such training institution, employment, experience and CPD activities on confidence levels. However, the response rate was not such that it was considered a sufficient effect size would have been reached. Furthermore, an initial consideration of the quantitative data suggested that respondents were not representative of the EP profession more broadly (e.g. a higher percentage of respondents held additional qualifications or had experience working in specialist settings).

3.8.2 Phase 2 (Qualitative)

Interview data was analysed using reflexive thematic analysis (RTA) (Braun & Clarke, 2022). Thematic analysis (TA) is a “family of methods” (Braun & Clarke, 2023), frequently used for analysing qualitative data. Patterns of meaning known as themes are generated across the data set in order to address the research question. According to Braun and Clarke (2023) the process by which the themes are arrived at are underpinned by the researchers underlying research values. Having first published on TA in 2006, Braun and Clarke added the term ‘reflexive’ in 2022, to distinguish their approach from other TA approaches and to recognise the subjective nature of analysis. They (Braun & Clarke) liken their approach to what Kidder and Fine (1987) describe as ‘Big Q’ qualitative research’. Unlike ‘small q’ research which utilises approaches more akin to positivism (e.g. inter coder reliability or the process of ‘theme searching’), ‘Big Q’ research analysis aligns with qualitative research values and RTA acknowledges the influence of the researcher on theme generation. Braun and Clarke (2022) encourage the researcher to reflect on their own beliefs and experiences and how these have influenced their interpretation of the data, rather than trying to control for subjectivity. With this in mind, it is expected that the same data set would be interpreted differently, by different researchers with the outcome of potentially different themes.

RTA is a widely used approach that Braun and Clarke (2022) describe as flexible, accessible and applicable to various theoretical frameworks, it therefore accommodates the critical realist position upheld in this research. Given the researchers personal experience of ABI the use of an analysis approach that encouraged reflexivity was important. Furthermore, RTA is appropriate to use when answering research questions relating to factors that influence, such was the purpose of the research questions here.

To aid reflexivity throughout this research, the researcher utilised regular supervision from both a research supervisor and a peer supervision group. Additionally, reflective logs were kept as a means of recording the researcher’s thoughts and emotional responses, particularly throughout the data collection phase. Some diary exerts are contained throughout this report.

Braun and Clarke (2022) outline RTA as a six staged process (see Table 5). They emphasise that each stage is not exclusive from another and that rather than working through in sequence, there is an element of moving in and out, as the researcher shifts from being up close to the data, looking at the finer details, (during coding), then moves away for a bigger picture perspective when generating themes. They then need to move in close again to check whether the codes and quotes align with the themes and subthemes they have been placed within.

Following data collection, each interview recording was uploaded as an mp4 audio file into the ‘transcribe’ function of MS word online, for which access is provided through the researcher’s university. All documents were stored securely on the Microsoft 365 OneDrive. The initial transcript that this provided was then checked for accuracy against the original recordings, with any amendments necessary being made by the researcher (see appendix I for an example transcript). Each transcript was read a further two times in order that the data could be considered against the research questions. Rough notes were taken during this process in relation to the researcher’s initial observations of similarities and differences across the data set. Some ideas regarding initial themes were beginning, although none of the initial ideas remained in the final themes and on reflection some initial ideas may have been more akin to topic summaries, which does not align with the RTA approach.

Once all transcripts were accurate, they were converted from a ‘Microsoft Word Document’, to a ‘plain text document’. These documents were then imported into an Excel spreadsheet, (using the ‘data’ – ‘from text/CSV’ options) in preparation for coding (see appendix J for an example). Each of the seven transcripts were imported into a different ‘sheet’ of the same workbook. This allowed the researcher to see a ‘code list’ of the codes already applied across the data set as a whole. The data set was coded sequentially and once complete was repeated (as per Braun & Clarke’s, 2022 recommendation). See Table 6 for a coded data example.

The decision was taken to use this approach rather than utilising software such as MAXQDA, as the researcher is more familiar with the functionality of the Microsoft suite.

Table 5

Stages of reflexive thematic analysis (Braun & Clarke, 2022)

Stage	Description of the process
1. Familiarising yourself with the dataset	Reading and re-reading the data and making notes on initial observations of both the individual data sets (e.g. each interview transcript) and the dataset as a whole.
2. Coding	Attributing succinct labels (codes) to the parts of the dataset that are pertinent to answering the research questions. This should be repeated at least twice. Code labels may be latent or semantic.
3. Generating initial themes[7]	Examining codes and beginning to develop broader patterns of meaning (potential themes).
4. Developing and reviewing themes	Checking potential themes against codes and the entire dataset to ensure that the story told answers the research questions.
5. Refining defining and naming themes	Determining the scope and focus of each theme and deciding on an informative name
6. Writing up	Weaving the narrative and data extracts.

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[7] This has changed from the 2006 (Braun & Clarke) description, in which stage 3 was ‘searching for themes’ in recognition that the researcher plays an active role in theme development rather than a passive role of looking for something that exists.

The coding process was completed from an inducive orientation. According to Braun and Clarke (2022) this is a data driven approach that seeks to “give voice to participants” and illuminate their experiences. This approach aligns well with the aims, purpose and questions of this research. Furthermore, this research is not undertaken from a particular theoretical lens through which the data need be interpreted, meaning a deductive orientation is less applicable.

The level of coding spanned the continuum from semantic (participant-driven, descriptive) to latent (researcher-driven, conceptual). Whilst the initial intention was to apply semantic codes, it soon became apparent that this was easier to do with some data than others. For example, when participants expressions were perceived as more explicit (e.g. in stating that they had undertaken additional qualifications) semantic codes felt easier to apply. However, some data appeared to require a deeper level of interpretation and reflection in regards to ‘what is it they are saying here?’ and thus latent coding felt more appropriate and came more naturally.

Table 6

Example of coded data

Data extract	**Codes**
What am I actually going to do here?	I feel unsure about how I can help
There's services and pathways for things like autism and ADHD, and people specialise in early years. These days attachment and trauma has become a specialism, which is fantastic, but I think there's just as many children out there with brain injuries who are not well understood, who don't have a pathway,	ABI gets less attention than other conditions

who don't have anybody, you know, in their corner really.	
They were thinking about the long term impact on his school experience, but I do think they probably thought that I would do some sort of standardised assessment.	We don’t always do the work others might expect
I've done the course at ICH and UCL, which is the paediatric neuropsychology course.	I have additional qualifications

Once the initial coding was complete the process of theme generation began. All codes were printed and cut out and they began to be grouped together based on similarity of meaning (see appendix K). Tentative theme names were considered but the researcher was not bound to these initial ideas. Through ongoing reflection, the code groupings altered, and new tentative names were considered. Once the researcher reached a point in which they were happy that they had grouped all of the codes relevant to answering the research questions in a way that was meaningful for them, they returned to their coding spreadsheet. Each piece of coded data was reviewed against the code it had been given and its potential theme/subtheme. Potential quotes for write up were identified and collated into a table such as that shown at table 7. At this stage some of the codes were relabelled and reconsidered in regards to the most suitable theme or subtheme. Data that had been given more than one code was also considered and a decision was made regarding with which subtheme it best sat. This process supported the beginnings of the writing up process as it provided the researcher an opportunity to reflect on the narrative that they were going to present in relation to their findings (see chapter 4).

Table 7

Potential quotes from the coded data

Code	Quotes
The role of the initial EP training	Everybody should be doing training on their doctorate course and it should be more than just a two or three hour lecture. (participant 1) I guess you know that would be my next target is looking at where is it in that core curriculum and how is it taught in the universities? (participant 2) And I know some clinical courses have done it where they have integrated some of those competencies into their courses And I wonder if that might be something to consider in longer term. (participant 5)
I didn't have much teaching at uni on this	I've had one lecture at university, which probably amounted to about an hour. (participant 1)

Below is an extract from the researcher's diary in relation to the analysis process

As the process of analysis moved on I became more and more convinced that I had over coded and struggled to resist the urge to code more of the data set than was required for the purposes of answering the research questions. The more confident I became in my analysis the happier I was to 'let go of' the codes which I determined were not relevant to answering the research questions. I also realised that codes that initially appeared to form part of the same theme may not be best placed together. For example, I had several codes related to CPD and initially, when overwhelmed with so many codes, the easiest thing seemed to be to put them together. It came to make sense to me, through the iterative process of moving between the analysis stages, there was a dichotomy within the codes that would not be appropriate for them same theme. Therefore, the theme of CPD was dissolved with some codes moving to facilitating factors and others to barriers. It was only through the lengthy engagement with the data that a decision within which I was comfortable was able to be reached. This was not a process to be rushed.

3.9 Ethical considerations

In order to ensure that this research was carried out in line with the principals and statements detailed in the BPS (2021a) Code of Ethics and Conduct and the Code of Human Research Ethics (BPS, 2021b) the following steps were taken:

3.9.1 Approval

Ethical approval for this research was granted by the Tavistock and Portman Trust Research Ethics Committee (TREC) on 23rd March 2023 (appendix L).

3.9.2 Informed consent

Participants were provided with an information sheet (appendix E) outlining the purpose of the research, the time expected to complete the research, any possible advantages and disadvantages to participation and the parameters of confidentiality. This enabled participants to make an informed choice regarding their participation. Participants were required to confirm, using a set of check boxes, within the Qualtrics platform, that they had read and understood this information, before confirming that they "hereby and fully consent to participate". Only once participants had agreed to all of the aforementioned were they able to proceed to be shown the questions. The researchers contact details were provided as part of the information sheet, should participants wish to ask any questions prior to their engagement with the research.

Participants who took part in the second phase of the research were required to further provide consent explicitly for this phase. The researcher read the key information from the information sheet to participants who provided consent verbally, prior to the commencement of the recording.

3.9.3 Right to withdraw

Participants were advised that they were not obliged to take part in the study and that they were free to withdraw at any time. They were advised that they could do so without any disadvantage and without any obligation to give a reason. Participants were provided with the contact details of the researcher should they wish to make contact regarding their participation. Any responses that were incomplete were considered as a withdrawal by the participant and no identifiable information for these incomplete responses was obtained.

Participants who engaged in the qualitative phase of the research were advised, following the interview, that if they decided to change their mind regarding their participation that they could withdraw at any time, up until the data had been analysed, at which point their participation would have already influenced the findings of the research.

3.9.4 Mitigation of risk

The risks associated with taking part in this research were believed to be low. However, it was considered that there was a small possibility that recalling the details of their work with children with ABI could be distressing. Furthermore, EPs may have had personal experience of ABI which might have meant that participation was triggering for them. In order to mitigate against this potential risk, participants were provided with the details of resources and organisations that they could access (Mind and the

Samaritans), should they find that participation elicited an adverse emotional response for them. In addition to this, participants were advised that they could pause or discontinue their involvement at any time (see right to withdraw) with no adverse effects. Participants involved in phase two of the interviews were provided with an opportunity to debrief with the researcher, following the completion of the interview, outside of the data collection process.

3.9.5 Debrief

Participants were provided with a de-brief sheet (Appendix G) at the point at which their engagement with the research ceased. This was built into the Qualtrics software for participants during phase one of the research. The de-brief sheet thanked participants for their engagement with the research and signposted them to the mental health charities Mind and the Samaritans, in the event that they found their participation triggering and they wished to seek support. Furthermore, the researcher contact details were provided should participants wish to discuss anything further.

Participants were also offered an opportunity to debrief with the researcher, and ask any questions, outside of the data collection process.

3.9.6 Confidentiality and Data protection

Participant data was anonymised within both elements of the research. All identifiable details were changed and participants were indicated by use of a numeral. Only the primary researcher is able to link the participants original identifiers with the pseudonym. Identifying information was not collected in phase one of the research as a matter of course. Names and contact details were only provided by participants when they consented to being contacted for engagement in phase two of the research. This information was not exported from the Qualtrics survey software.

The confidentiality of the information provided by participants is subject to legal limitations in data confidentiality. For example, if the data is subject to a freedom of information request.

Participants who took part in phase two of the research were advised that, the limited sample size for this phase of the research had implications for the level of anonymity. For example, whilst every effort to protect participants identity has been taken, they may recognise some experiences and examples shared during their interview, in quotes used within the write up.

The researcher is responsible for the security of all of the data collected throughout this research. All data is stored electronically on the researchers secure One Drive, which is associated with their institutions Microsoft account. Access to these files is available to the research team by password only. In line with the 5th principle of the *Data Protection Act 2018* (UK), which states that personal data shall not be kept for longer than is necessary, the data associated with this research will be stored for a period of 10 years. This is in line with the UK Research and Innovation (2022a) guidance on retention for research data and records. At the point at which 10 years has passed the data will be securely disposed of.

Participants were provided with a summary of all of the above within the participant information sheet (appendix E).

3.9.7 Support for the researcher

The researcher was provided regular supervision (focused solely on research) from a qualified psychologist employed by the Tavistock and Portman NHS Trust. These sessions provided a space for the researcher to test their research decisions and enabled an element of quality assurance. Support was also provided in the form of reviewing written elements of the research, including the TREC application, the survey and the written record.

In addition, the researcher engaged in monthly peer supervision with a group of other TEPs who were conducting research using RTA. This supported the quality assurance of the research and provided a safe containing space (Bion, 1962) through which the researcher could discuss their insecurities, subjectivity and the impact of the research. It also provided a level of accountability as group members discussed their progress and made pledges regarding the work they would complete between sessions. This support enabled the researcher to feel confident to make progress with the research in the intermittence of the supervision described above.

3.9.8 Recruitment

The researcher was cautious not to invite more people to participate than could be accommodated. Participants were asked at the end of phase one if they would be willing to take part in a follow up interview and were advised that the researcher was ‘seeking participants’. No guarantee was given that those who expressed an interest would be asked to interview. At such time that potential interview candidates were contacted this was limited to 10 participants (see 3.6.2: Recruitment). This meant that in the unlikely event they all responded with continued interest, participant numbers would not exceed that recommended for the analysis type (Braun & Clarke, 2013).

3.10 Research Quality

3.10.1 Phase 1 (Quantitative)

The integrity and quality of quantitative research is judged using the concepts of validity and reliability (Kimberlin & Winterstein, 2008). Validity refers to the extent to which the survey element of the research measures what it is supposed to (Heale & Twycross, 2015). Reliability refers to the extent to which the survey results can be replicated, if repeated, under the same conditions (Zohrabi, 2013).

To support the content and face validity of the survey used in this research it was reviewed by a qualified EP and a graduate psychologist, who provided feedback to the researcher regarding any revisions or re-wording required to ensure that all questions were functional for the purpose of the research questions. This was also carefully considered during the planning phase when a justification for each question was recorded and reviewed (appendix D). The internal validity of the survey was supported by the mixed methods approach. Participants were asked to describe their confidence in more detail during the interview phase, which provided an opportunity to assess the extent to which the survey measured what it was supposed to (i.e. confidence). This research was less concerned with external validity (the applicability of the findings to broader contexts), due to the purpose and theoretical positioning. Specifically, the descriptive purpose and the use of interviews sought to gain supplementary detail regarding how higher confidence is achieved and it is acknowledged that confidence and factors that support confidence vary.

To support the reliability of the survey, questions were straightforward and clearly worded. Participants were asked specifically about their confidence in undertaking particular work with the use of a range of questions, rather than being asked about their confidence working with CYP with ABI more generally. This increased the reliability of responses as the question intent was made clear.

3.10.2 Phase 2 (Qualitative)

To ensure the validity of the qualitative element of the research the following principals outlined by Yardley (2000) were followed:

3.10.2.1 Sensitivity to context

The academic context of the research has been explored through the literature both for the EP audience and also more widely, using a systematic approach. This enabled the researcher to establish not just what has been written for an EP audience, but also more widely (for example, in considering how schools are supporting children with ABI and where they are drawing support from). Individual context is also important. With the prevalence of brain injury so high, it is likely that participants may have personal experience of this which has been accounted for within the ethical considerations outlined above.

3.10.2.2 Commitment and rigour

The researcher spent considerable time engaging with the topic area, both formally and informally, prior to commencement of the research. Data analysis has been completed using a published model which is widely well regarded (Braun & Clarke, 2022). Validity of the research is increased by the good fit between research aims, method of investigation and analysis and philosophical position. In order to ensure the trustworthiness and credibility of the data participants were asked, “In your questionnaire responses you indicated high levels of confidence when working with CYP with ABI, perhaps you could describe this in more detail for me?" This sought to ensure that data was being collected on the same phenomenon. Access to a research supervisor and a peer supervision group provided opportunities for discussion regarding the interpretation of the qualitative data.

3.10.2.3 Transparency and coherence

The use of a research diary documenting and justifying the decisions taken along the research journey have supported transparency and coherence. Furthermore, this documentation supported the researcher in detailing every aspect of the research within this final write up.

Interviews have been transcribed and quotes have been used within the results section of this document.

3.10.2.4 Impact and importance

Of most importance is the impact of this research on practice. Consideration has been given to this throughout this report, and in particular within the rationale for this research (2.7) and the implications (5.3). The detailed, descriptive write up of the research process given here enables the reader to consider the transferability of the findings to other contexts.

3.10.2.5 Reflexive validity

In addition to the Yardley (2000) principals outlined above, the inclusion of the researcher's motivation to undertake the work, along with reflective accounts of their experience (both of ABI and as a researcher), throughout this write up, increases the reflexive validity. Consideration has been given to how this research might have been influenced by factors outside the researcher's professional life and rather than try to mitigate for this, the reflective accounts have considered the influence of this on the research and the participants.

4. Findings

4.1 Chapter overview

This chapter will present both the quantitative and qualitative findings of this research. Quantitative findings will be presented systematically and qualitative findings thematically. Please see chapter five (discussion) for further interpretation and contextualisation.

4.2 Phase 1 (quantitative) findings

Phase 1 sought to answer the question *'What work are EPs doing with CYP with ABI and how confident they are when undertaking this work?'* To explain this, a survey was distributed among EP forums nationwide (full details of the recruitment strategy can be found at 3.6.2). A total of 66 responses were received, however, initial consideration of the data revealed just 43 were complete. The incomplete responses were excluded prior to data analysis.. A total of 43 responses were analysed and are represented below. The raw data is provided at appendix M.

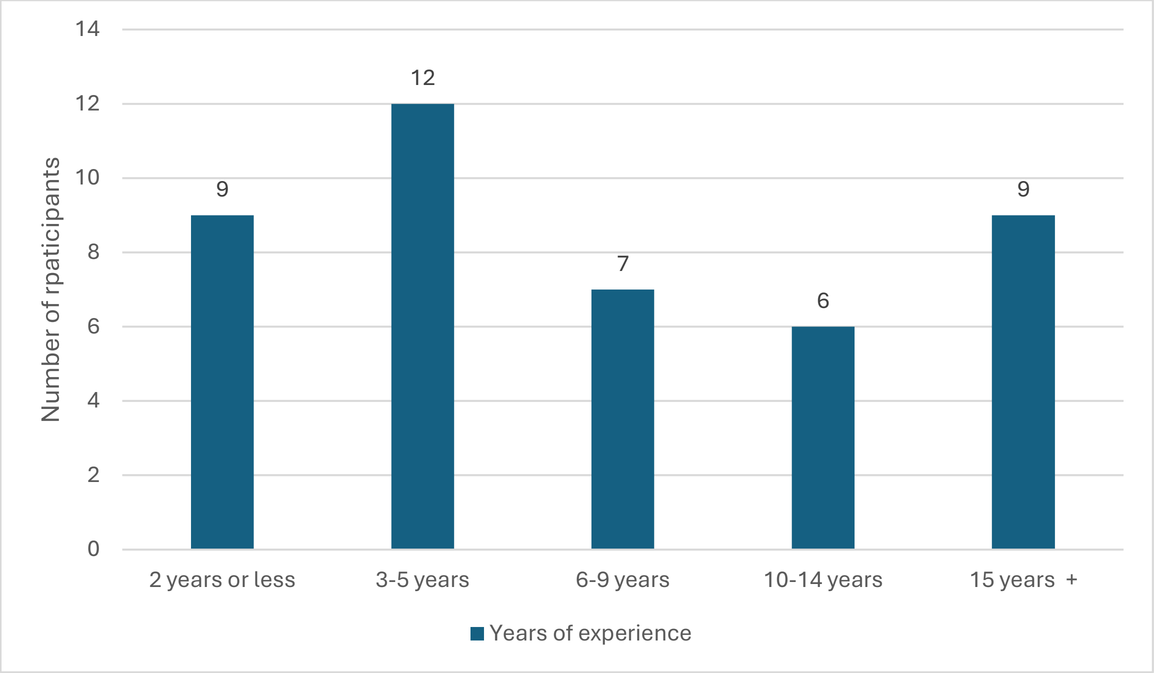
The findings are discussed in the order in which questions were presented to participants. Demographic information such as years of experience, route of training and training institution were collected for the purposes of contextualising the findings and to consider the representativeness of participants.

4.2.1 Number of years practising

The first question of the questionnaire asked participants to indicate the number of years they have been practising as an EP. Figure 3 demonstrates the range in experience held by participants. The majority of participants had 3-5 years' experience (n=12), followed by less than two years (n=9) and 15 years + (n=9), 6-9 years (n=7) and 10-14 years (n=6).

Figure 3

Participants' years in practice

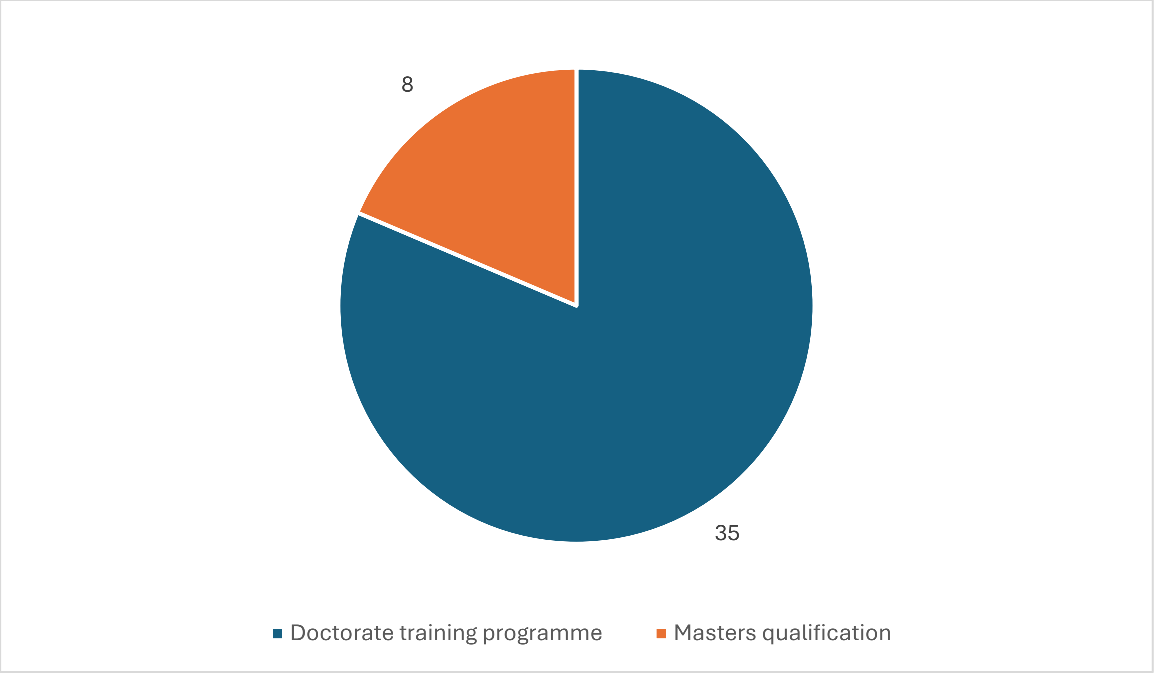


4.2.2. Route of initial training

Participants were then asked to indicate whether they completed their initial EP training via the current Professional Doctorate training route, or through the previous training route of a Masters degree. The majority of participants qualified as an EP through the Doctorate training programme. This is likely to be linked to their years of experience (Figure 3) and how many years ago they trained. See Figure 4.

Figure 4

The route through which participants qualified as an EP



4.2.3 Training institution

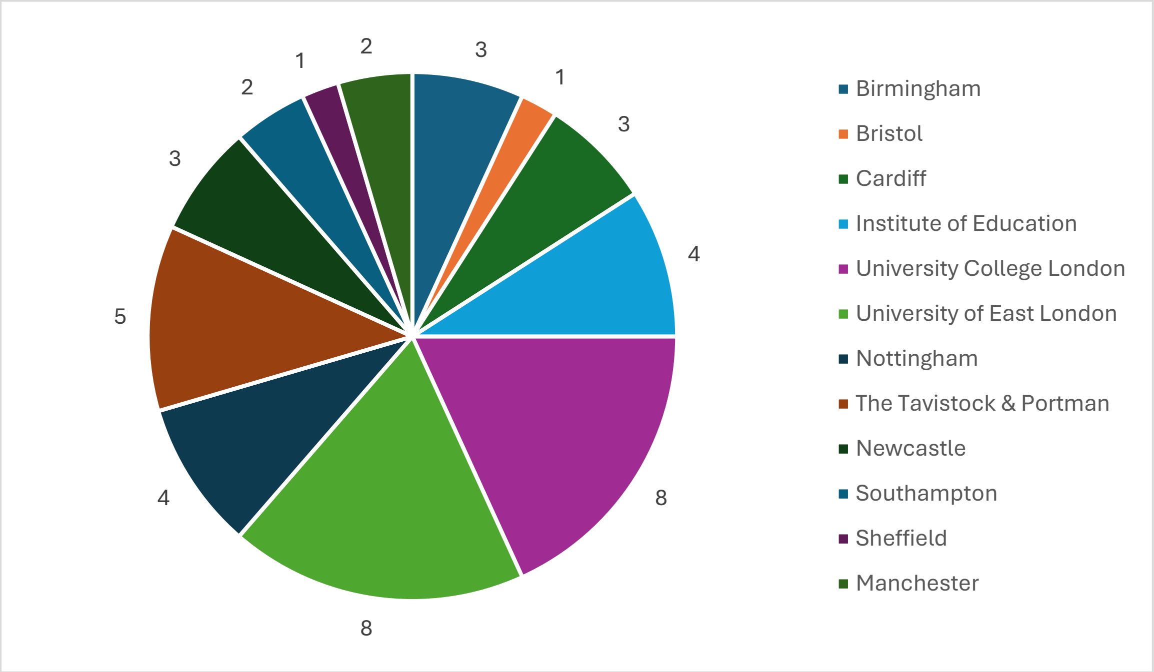
Question three asked participants to indicate at which institution they completed their initial EP training (Figure 5). Twelve training institutions were represented. Most participants trained at University College London (n=8) or the University of East London (n=8). Five participants trained at the Tavistock and Portman, four at the Institute of Education, four at Nottingham, three at Newcastle, three at Cardiff three at Birmingham, two at Manchester, two at Southampton, one from Sheffield and one from Bristol.

One participant indicated that they had completed their initial training at two institutions. Given the length of time this participant indicated they had been practising as an EP, it is likely they the completed an initial Master's degree at one institution and completed a Doctorate later[8], however, in the interests of representing the raw data accurately, and given this participant indicated that they completed their initial training through the Doctorate training route, they are included under both institutions. The responses for this question therefore total 44, despite the overall response rate being 43.

Unfortunately, neither the University of Exeter or the University of East Anglia were represented in the data.

Figure 5

Summary of institutions at which participants completed their initial EP training



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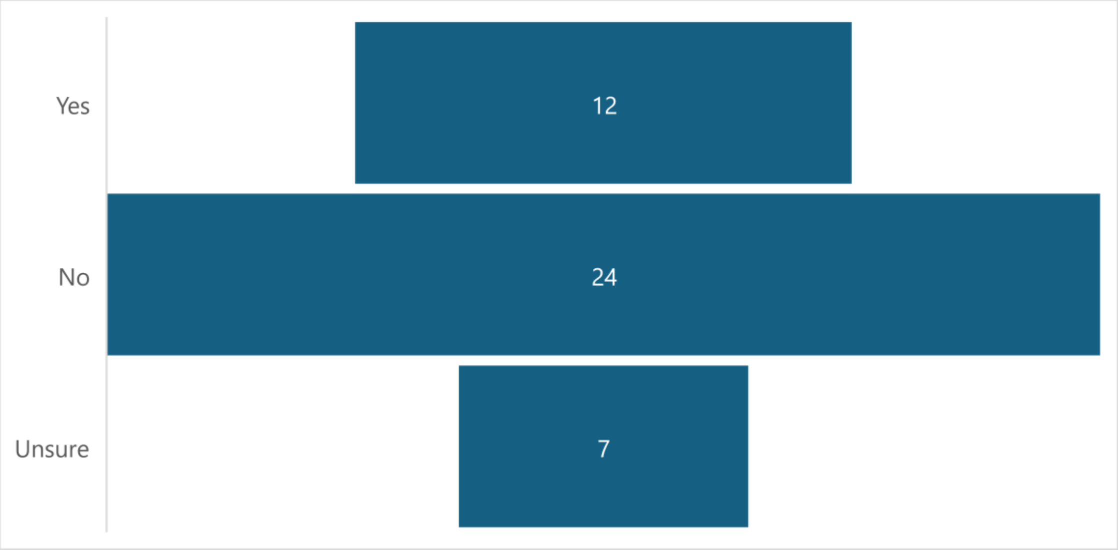
[8] This participant may also account for the fact that eight participants reported completing their initial training via a Masters (Figure 2) but nine participants reported practising for 15 years or more (Figure 1).

Question four asked participants whether or not they had received any teaching on ABI throughout the course of their initial training. The majority of participants reported that they had not (see Figure 6). Seven participants were unsure as to whether or not they had received any teaching.

Figure 6

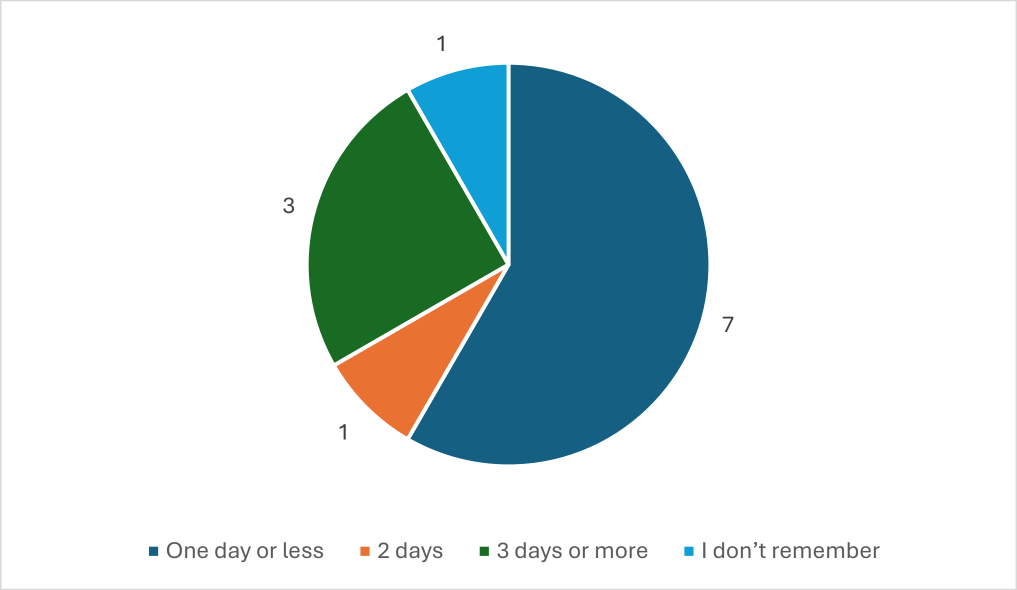
The number of participants who indicated that they had had teaching on ABI



Participants who indicated that they had received teaching on ABI throughout the course of their initial training were asked to specify how much. They were asked to select the option which best represented the amount of training they had received from the following options: One day or less, two days, three days or more, I don't remember how much. The majority of those who had received training reported that this was one day or less. See Figure 7 for a summary of responses.

Figure 7

The amount of teaching EPs received as part of their initial training

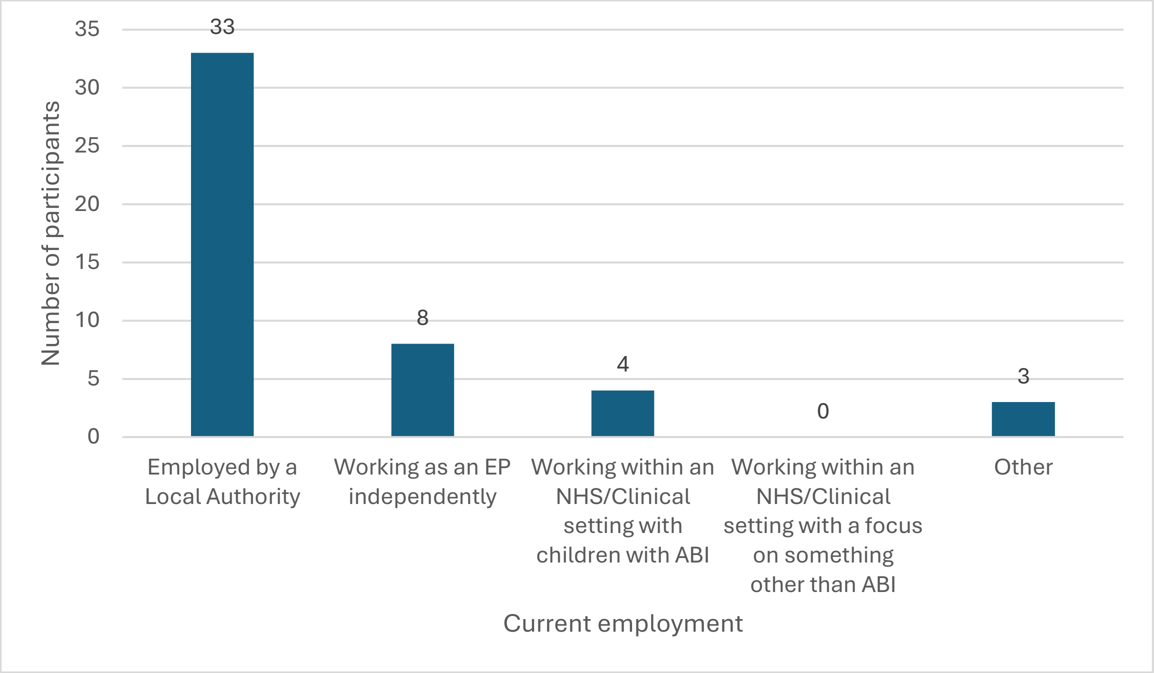


4.2.5 Current employment

Question five asked participants to indicate which of the following best described their current employment: Employed by a LA, working as an EP independently, working within an NHS/clinical setting with children with ABI, working within an NHS/clinical setting with a focus on something other than ABI or 'other'. Participants were asked to select all those that applied. The results, as presented in Figure 8 (below) revealed that the majority of participants worked within the LA context (n=33). Eight participants worked independently, four within an NHS/clinical setting with children with ABI and three in 'other' employment. Five participants reported more than one employment type.

Figure 8

Summary of participants current employment



Details provided by those who selected other are outlined in Table 8 below.

Table 8

Question 5. Answers given by those who indicated 'other'

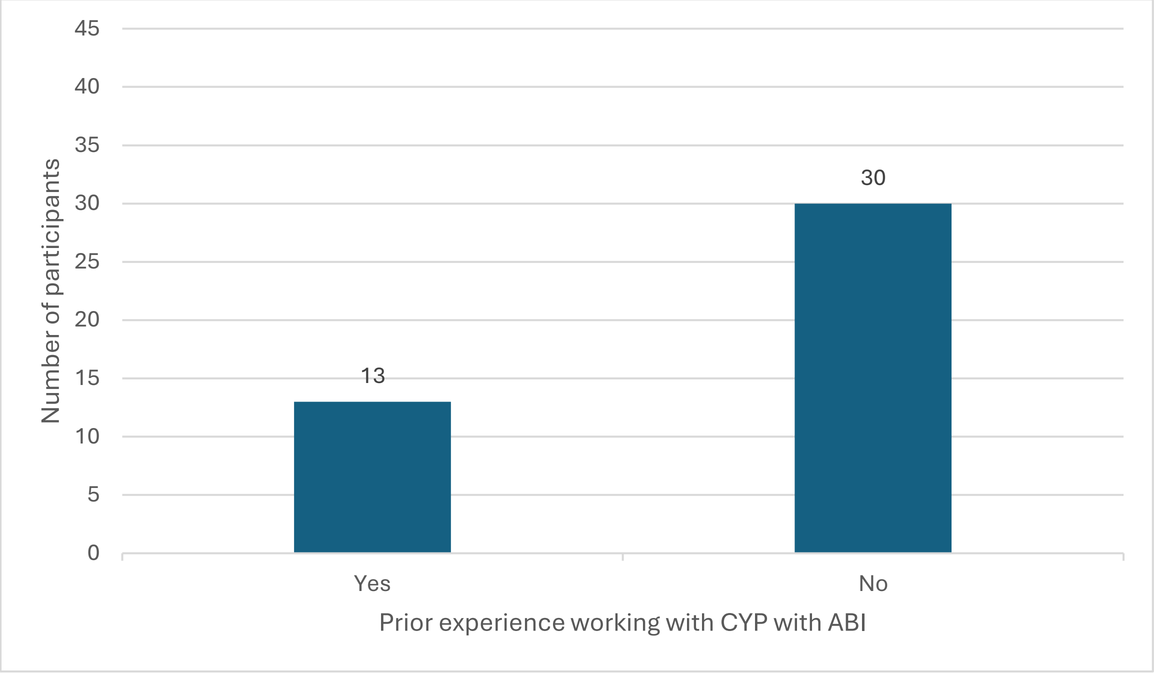
Other	**N**
I work at an organisation that provides neurorehabilitation for CYP with ABI	1
I work for a multi academy trust	1
I work for a community interest group	1

4.2.6 Prior experience working with children with ABI

Participants were asked whether they had any experience of working with CYP with ABI prior to commencing their training to become an EP. The majority of participants did not (n=30). See Figure 9.

Figure 9

The number of participants who reported prior experience working with CYP with ABI



Participants who indicated they did have experience working with CYP with ABI prior to commencing their EP training were asked to provide details regarding their experience. The range of responses received is detailed in Table 9 below.

Table 9

Question 6: The range of pre training experience reported by participants

Experience described	**N**
Working in a special school	3
Working at a special needs children's centre	1
Working with a pupil who had meningitis.	1
Working a secondary school learning support assistant (LSA) with pupils with encephalitis and tumour.	1
Working with children with disabilities as an Learning Support Assistant and Portage practitioner	1
Working as a playworker at a playscheme for children with additional needs, which included ABI	1
Working as a teacher responsible for SEND groups	1
Working with children with non-traumatic brain injuries, their parents and teachers	1
Working in a Child and Adolescent Mental Health Service (CAMHS) with young people with ABI	1
Behavioural difficulties is common with them. Some tend to be aggressive and lack	1

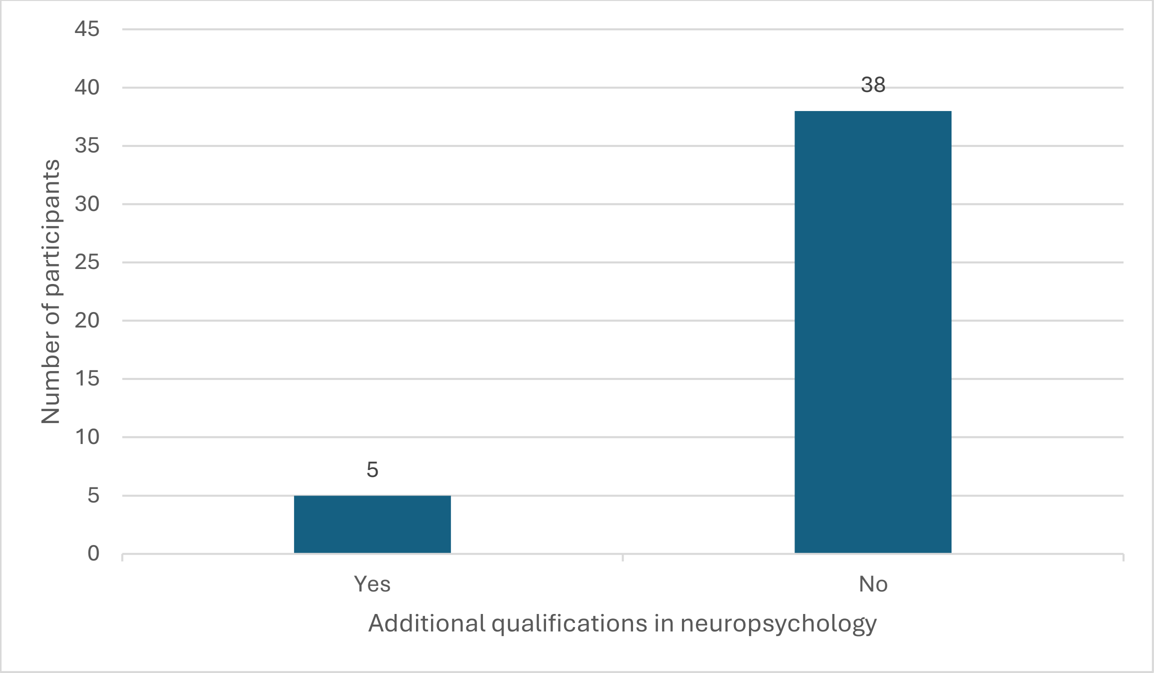
social judgement which affects their relationship with family and friends.	
They often feel left out in society and hence makes them react negatively with those around them.	1

4.2.7 Additional qualifications in neuropsychology

Question seven asked participants whether they had completed any additional qualifications in neuropsychology since they became qualified as an EP. Some participants (n=5) reported that they had, but the majority had not (n=38). See Figure 10.

Figure 10

Participants who had attained additional neuropsychological qualifications since becoming an EP



Those participants who indicated that they had obtained additional qualifications were asked to provide details of the qualifications they had completed. The responses given can be found in Table 10.

Table 10

Question 7: Breakdown of additional qualifications attained by participants

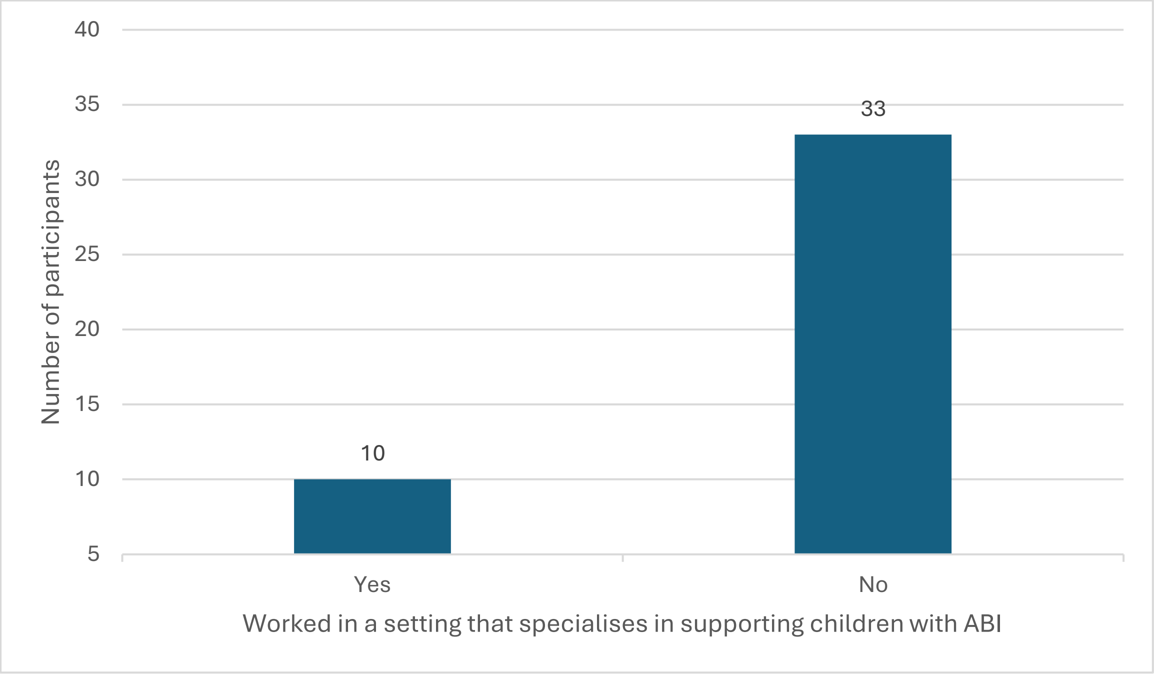
Qualification attained	**N**
Postgraduate Diploma (PGDip) in Paediatric Neuropsychology	2
Doctorate degree in psychology and neuropsychology	2
Modules in Child Paediatric Neuropsychology	1
BPS Qualification in Clinical Neuropsychology (ongoing)	1

4.2.8 Experience working in a setting that specialises in supporting children with ABI

Question eight asked participants whether or not they had worked in a setting that specialises in supporting children with ABI since they qualified as an EP. Ten participants reported that they had, but the majority had not (n=33). See Figure 11 (below).

Figure 11

Summary of participants who reported working in a setting that specialising in supporting children with ABI

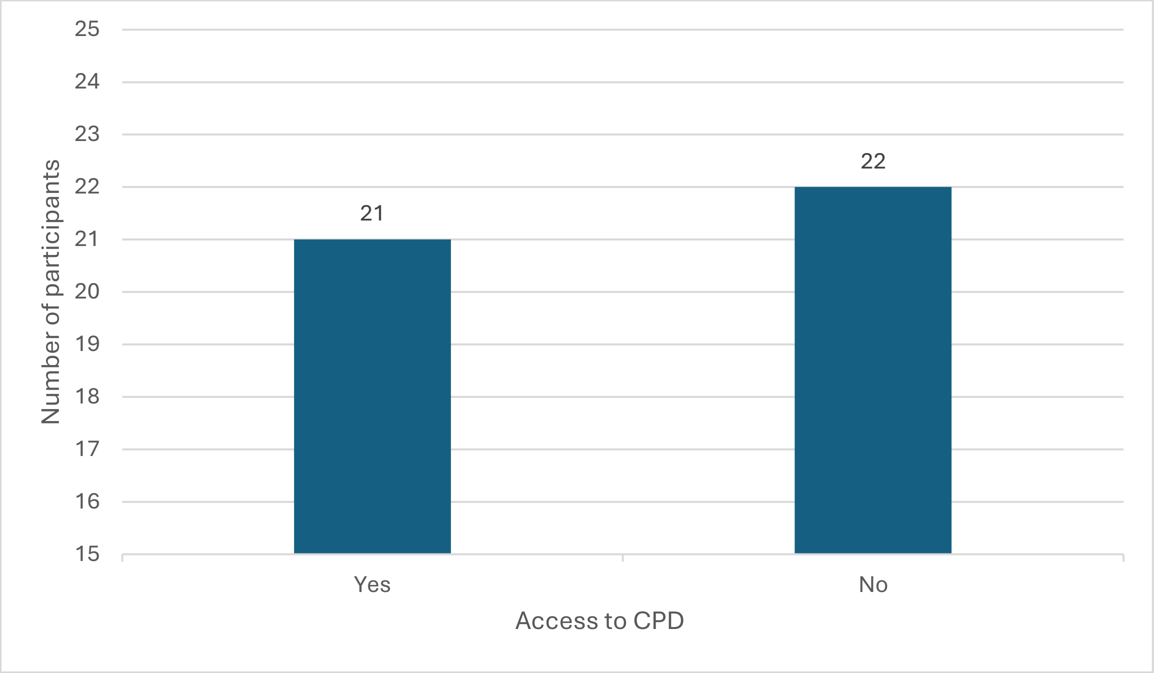


4.2.9 Access to continued professional development (CPD)

Participants were asked whether or not they had had access to CPD activities in relation to ABI since qualifying as an EP. Figure 12 (below) shows that almost half (n=21) responded 'yes'.

Figure 12

Summary of participants receipt of CPD in relation to ABI

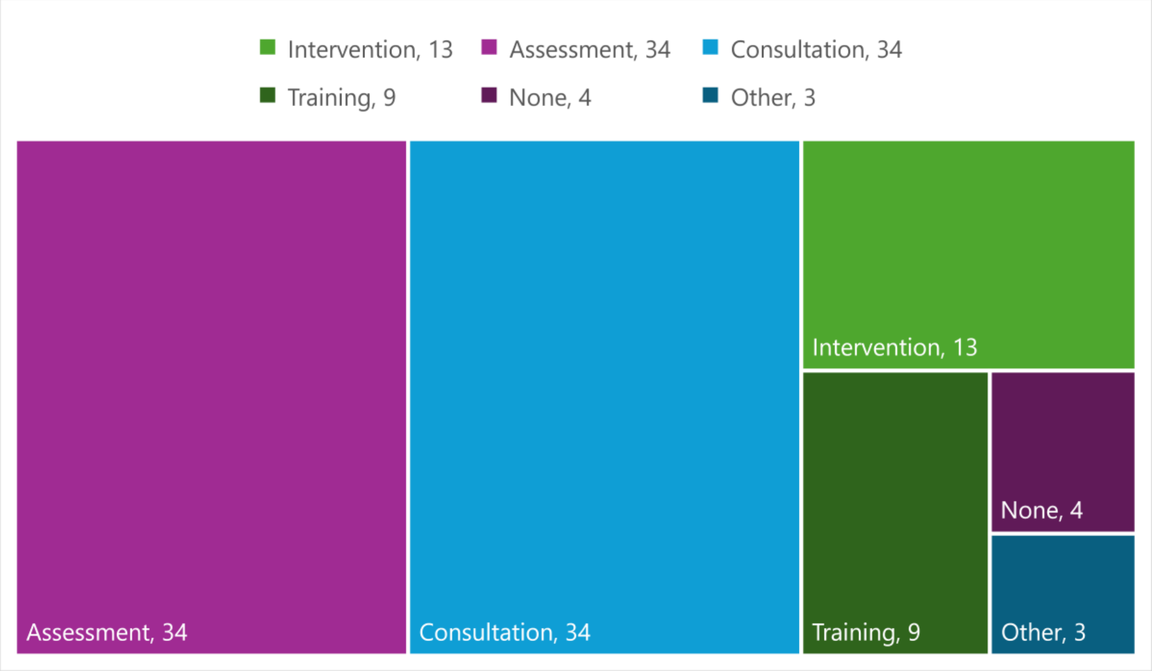


4.2.10 The range of work undertaken with CYP with ABI

Figure 13 illustrates the different types of work participants reported undertaking with CYP with ABI. Participants were able to select multiple options, in order that they could indicate all those that applied. They were asked to select from the following: Consultation (n=34), assessment (n-34), intervention (n=13), training (n=9), other (n=3) and none (n=4).

Figure 13

The range of work carried out with CYP with ABI



Participants who selected ‘other’ were asked to describe the nature of this work. The responses given were as follows:

- Trauma therapy, developing systems and pathways with CYP with ABI, creating as advisory groups, joint presentations with young people
- Talks to interest groups such as CHIT (Children's Head Injury Trust)

One participant responded ‘N/A’ when asked to describe the ‘other’ work they had undertaken with CYP with ABI.

Participants who indicated that they had provided training in relation to CYP with ABI were asked to indicate the audience for the training. They were able to select all those that applied, from the following options: EPs, parents, schools staff, and ‘other’. A breakdown of the responses can be found at table 11.

Table 11

Question 10: Breakdown of the responses given for audience of training provided

Audience	**N**
Educational Psychologists (EPs)	8
School staff	8
Parents	6
Other	4

Details described by those who said ‘other’ were as follows:

- Early help services
- Hospital teams
- Child and adolescent mental health services
- Doctoral courses
- Social workers
- The child
- Other individuals with ABI
- The Children’s head injury trust (CHIT)

4.2.11 The confidence of EPs in relation to a range of a range of work

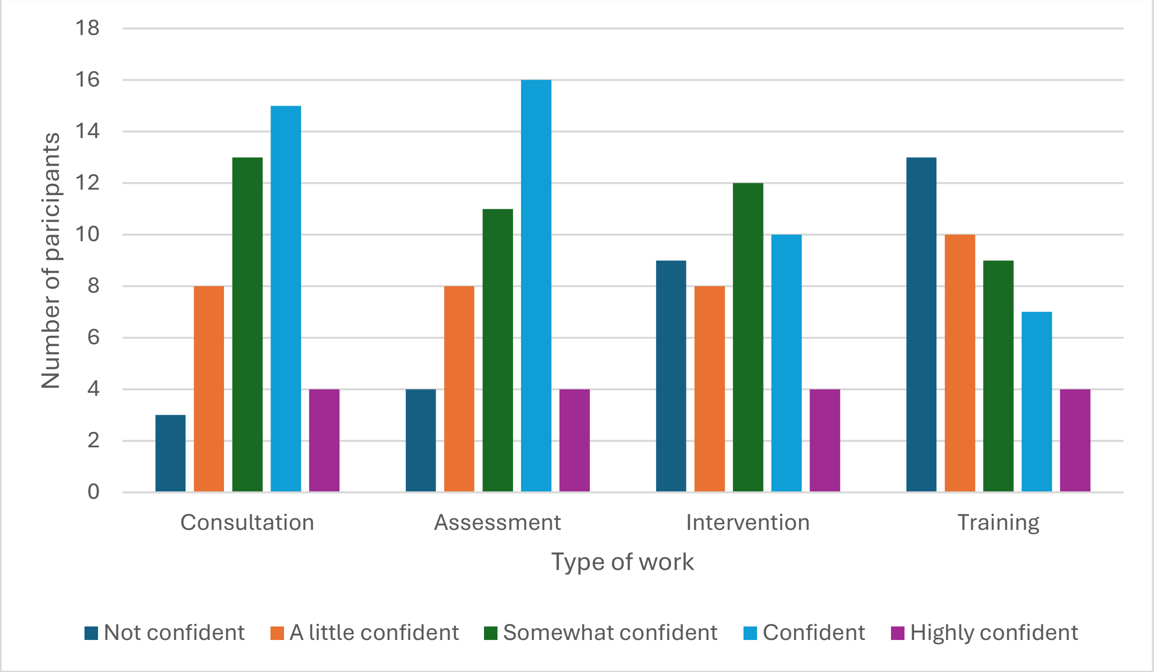
The following four questions asked participants to indicate the extent to which they would feel confident should they be asked to carry out the following pieces of work with a CYP with ABI: Consultation, assessment, intervention or training. Responses are shown in Figure 14.

Participants were asked to select whether they would be 'not confident', 'a little confident', 'somewhat confident', 'confident' or 'highly confident' in relation to each work type.

The majority of participants reported that they would feel confident to undertake consultation (n=15) or assessment (n=16) work. Confidence in delivering training was the lowest with most (n=13) participants indicating that they would not be confident to complete this work. Most participants (n=12) reported feeling 'somewhat confident' in their ability to complete intervention work.

Figure 14

The confidence of EPs when engaging in a range of work with CYP people with ABI

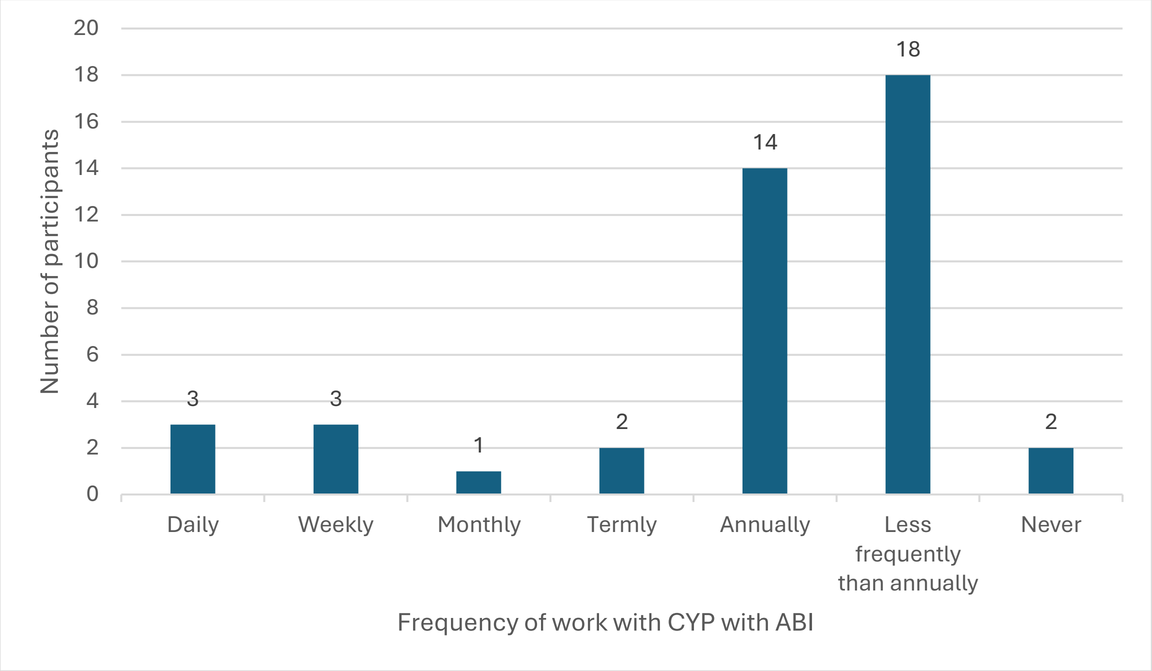


4.2.12 The frequency of work with CYP with ABI

The final question asked participants to indicate how often they worked with CYP with ABI in their current role (Figure 15). Participants were asked to choose from one of the following options: never, less frequently than annually, annually, termly, monthly, weekly, or daily. The majority of participants (n=18) indicated that their work with CYP with ABI was less frequently than annually, followed by annually (n=14), daily or weekly (n=3), termly or never (n-2) and monthly (n=1).

Figure 15

Summary of participants frequency of work with CYP with ABI



4.2.13 Summary of phase 1 (quantitative) findings

The findings from phase one show that the majority of participants who took part in the research have been practising for 3-5years and are employed within a LA setting. Most participants trained at either University College London or the University of East London and the majority completed their initial training through the current Doctoral training route.

Most participants reported that they did not receive teaching on ABI during their initial training, and those that did reported that what they did receive was delivered in one day or less. Almost half of participants had received CPD on ABI since qualifying as an EP. Most participants reported no prior experience with working with CYP with ABI prior to becoming an EP. Some (n=5) had gained additional qualifications or worked in a specialist setting supporting CYP with ABI (n=10) since becoming an EP, but most had not. Assessment and consultation work was the most frequently undertaken and also the type of work which EPs reported being most confident to deliver. Most EPs reported that their work with CYP with ABI occurs less frequently than annually.

4.3 Phase 2 (qualitative) findings

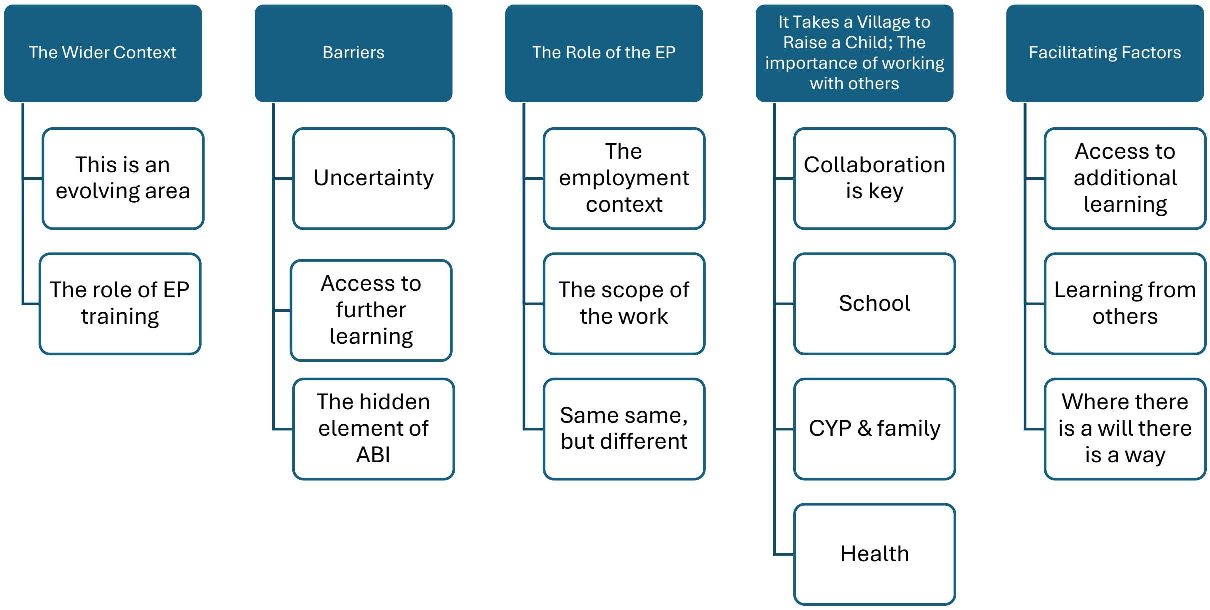
Phase 2 asked participants to further describe the work they are doing with CYP with ABI and explain factors that contributed to their levels of confidence when undertaking this work. This was achieved through the completion of semi structured interviews. Of those who provided consent at the end of phase 1, to be contacted regarding an interview the most confident participants were selected (for the rationale for this, please see paragraph 3.6.2). A total of seven interviews were completed.

The data obtained through the interviews has been analysed using Reflexive Thematic Analysis (Braun & Clarke, 2022). For a detailed description of this process please see previous chapter (paragraph 3.9.2). The themes and sub themes generated through the analysis process are displayed in Figure 16.

In the section that follows, each of the themes and sub themes generated will be presented.

Figure 16

Themes and subthemes generated through the analysis



4.3.1 Theme one: The wider context

Participants described a range of factors outside of the context of their daily work as a practising psychologist, that impact the work that is undertaken with CYP with ABI, the knowledge that is available and the extent to which this is, or is not, deemed a priority.

This theme consists of two subthemes: ‘This is an evolving area’ and ‘The role of EP training’.

4.3.1.1 This is an evolving area

This subtheme refers to participants indications that the rapidly evolving nature of the fields of neuroscience and neuropsychology has influenced the extent to which attention is paid to ABI and how there is an ongoing need to continue to learn and enhance the research body.

Participant 2 acknowledged that developments in the medical and political arenas have influenced the extent to which attention is paid to ABI. There appears to be an increased interest nationally.

> *“I think there's a little bit of momentum politically because there is a white paper going through and there's been some guidelines on return to life following brain injury that's required hospitalisation. So I think there's been a little bit more attention nationally.”*
> *(Participant 2)*
>
> *“I think with the improvement in technology for imaging ... there's something about pictures of brains that gets people interested. So yeah, there is more interest.”*
> *(Participant 2)*

Participant 5 reported noticing an increase in interest from Trainee EPs and an awareness that ABI is increasingly becoming a topic of thesis research. This was viewed as a positive step.

> *"It's really nice to see more and more trainee educational psychologists doing their research, in acquired brain injury. I'm delighted to see that coming through because I recognise that that's a sign that, you know, it's an area of growing interest and specialism."*
> *(Participant 5)*

Despite this increased attention, participants generally reported feeling that further work and research is needed. There was a sense that this needs to come from within the profession and be relevant to the EP role, as participants acknowledged that there is currently little available.

> *"…if you Google neuropsychology, you don't get much that's relevant to education."*
> *(Participant 2)*
>
> *"Let's do some research into this because there's very, very little out there from EP's. There's plenty out there from clinicals, plenty out there from neuros, nothing from EPs."*
> *(Participant 1)*

4.3.1.2 The role of EP training

This subtheme relates to the references made by participants about the role of their initial EP training. There was a sense that what has previously been provided is limited and participants felt that given the prevalence of ABI more emphasis should be placed on teaching TEPs about it. Comments were also made regarding the extent to which each of the training providers incorporates ABI into its teaching and there was a feeling that this is not consistent across the courses.

Some participants commented on the extent to which ABI had been covered during their training and there was a sense that this was not sufficient given the prevalence of ABI and likelihood of it appearing in casework

> *"I think it [ABI] is probably outside the initial training for a lot of EPs, but it is something that comes up in case work".*
> *(Participant 4)*

There was a desire among participants to increase the amount of teaching provided to TEPs during their training. In particular participant 5 wondered whether some of the neuropsychology competencies could be incorporated into those required to fulfil EP training, a step they described that has been taken by some Clinical Psychology training courses. This would ensure that all newly qualified EPs had a minimum level of teaching and/or experience in working with children with ABI. It should also address the feeling among participants that there is currently variation across the training providers with regards to the extent to which teaching on ABI is provided to TEPs.

> *"I do wonder whether or not EP doctoral training could consider… I know some clinical courses have done it where they have integrated some of those competencies into their courses and I wonder if that might be something to consider in longer term."*
> *(Participant 5)*
>
> *"I guess the only thing we haven't spoken about is the role of initial Ed psych training, like where is it In the curriculum? Because I think that varies wildly."*
> *(Participant 2)*
>
> *"some courses just have more than others, don't they? In terms of neuropsychology currently?"*
> *(Participant 5)*

4.3.2 Theme two: Barriers

Participants described a range of barriers that impacted the extent to which they felt able and confident to support CYP with ABI. There was a sense of uncertainty from participants about the support they may be able provide, and that access to further learning in this area can be difficult to obtain and put into practice. The hidden element of ABI may further present as a barrier to involvement from EPs and the extent to which children with ABI are recognised and advocated for.

The theme consists of three subthemes: Uncertainty, access to further learning and the hidden element of ABI.

4.3.2.1 Uncertainty

Despite the confidence expressed in phase one of the research, some participants made reference to the fact that they felt uncertain about how to support CYP with ABI. Greater uncertainty regarding the discreet role of the EP appeared particularly to be the case when there was a large muti-disciplinary team involved, and when assessment work had already been completed. This finding is also linked to the subtheme 'the scope of the work'. Feelings of uncertainty appeared to invoke anxiety in some and there was sense that being uncertain was uncomfortable. Participants expressed that they often had little experience in the area of ABI and described a need to engage with ongoing learning. This perhaps reflects the field of ABI being an 'evolving area', and thus also links with that subtheme.

> *"I hadn't really had, any real involvement or understanding of what head injuries actually meant."*
> *(Participant 1)*
>
> *"Noticing my own reaction to being given that particular case was anxiety, was whoa, where am I going to start? ... It's interesting what feelings of conscious incompetence this this area of work can raise."*
> *(Participant 4)*
>
> *"I was sitting there thinking could I add anything at the end of the day… There was so much information, I thought there's nothing, no strategies that I could add".*
> *(Participant 6)*

Despite the initial responses of uncertainty regarding their belief in their competence to complete work in this area, participant 4 reminded themselves of the skills they do have and described the use of self-talk as a means to encourage and foster self-belief.

> *"Just slow that down and think again. Like you can, you absolutely can do this."*
> *(Participant 4)*

4.3.2.2 Access to further learning

Several participants had accessed additional learning related to ABI, either through additional formal qualifications in neuropsychology or other avenues for CPD. Whilst aspiring to complete additional training and learning was generally highly regarded among participants, it was acknowledged that these can be difficult to access and a number of barriers to access were described. Some participants felt that there is misinformation out there and that a theory-to-practise gaps remain.

Financial barriers to accessing good quality CPD and additional qualifications were described by most participants. This is likely to make access to additional learning inaccessible to some.

> *"The cost is really prohibitive."*
> *(Participant 2)*

Participant 2 described feeling a sense that the Qualification in Clinical Neuropsychology (QiCN) is difficult to achieve for practising psychologists, particularly those based in LA's.

> *"I think a lot of people think it's [the QiCN] too high of a bar because it's quite difficult for people who are practising psychologist's to actually achieve....There would be all sorts of barriers ..... No wonder there's hardly any EPs that do it".*
> *(Participant 2)*

In addition to the financial barriers described, a range of other practical barriers were highlighted. These include time, access to appropriate supervision, placements and the extent to which good quality CPD in this area is offered. These barriers are likely to deter some EPs from pursuing further learning in this area.

> *"I really would love to become a paediatric neuropsychologist. I would love to do that, but it's trying to arrange the practical aspects of that training and the placements and all that."*
> *(Participant 7)*

Some participants expressed concern that there is misinformation out there and that when a little information is given, it can be misconstrued. Whilst the aforementioned barriers to good quality CPD and further learning remain, it is unlikely that those who are misinformed will receive more accurate information.

> *"A problem that we have is that it's kind of ... I would say there'd be a risk that you are going to have EPs that have been misinformed by this point, because there's a lot ... a lot of neuro nonsense out there ... and some of it is incredible prolific in our area of work"*
> *(Participant 7)*

Participants described the extent to which they had received input on ABI within the LA employment context. Some participants received no access to learning and those that had questioned the extent to which this was useful or applicable to their day-to-day work. Whilst theory to practice gaps remain there may be a limit to which CPD can facilitate increased confidence in this area.

> *"There have been regular CPD opportunities, but I don't think at the moment the relationship between the CPD I've had and its relationship to how I need to apply it in my everyday work ... the bridge isn't there for me just yet."*
> *(Participant 6)*

4.3.2.3 The hidden element of ABI

The hidden element of ABI refers to participants comments regarding the extent to which the prevalence of ABI is recognised. Whilst the numbers of children with ABI is high, the frequency with which it presents in day-to-day casework is perhaps limited and there was a sense that many children with ABI may not be identified as such. Participants described that children with ABI are less well advocated for than children with other SEN and a lack of understanding regarding the longer-term implications may contribute to this. Several participants also commented on the rapid and drastic change that can occur post injury, which is mostly unexpected.

A lack of understanding regarding the prevalence of ABI and the extent to which it is brought to the attention of the EP was considered by participants. There was a sense that the prevalence of childhood ABI is not well understood and that whilst this remains the case, the frequency with which it is brough to the EP attention is likely to be low. Some participants described suspecting ABI in CYP they have worked with, however, whilst this remained 'hidden' to the school and family, then the pupils needs were not presented to the EP as causally ABI.

> *"It's so common, but people don't treat it as common."*
> *(Participant 2)*
>
> *"It's recognising why we need to know about acquired brain injury. As educational psychologists. 40,000 children and young people every year. It's accumulative, so it's hugely unrecognised."*
> *(Participant 5)*
>
> *"I think I've had quite a few cases where it's [ABI] been hidden and suspected".*
> *(Participant 6)*

There was a sense from participants that the hidden element of ABI may impact the extent to which children with ABI are advocated for. Several participants referenced the prevalence rates in comparison to other SEND needs and described how other needs are better supported and advocated for. Participants suggested the possibility of specialist EP roles for ABI (such as there is for other SEND), and the introduction of a record keeping system, or list, as is the case for Looked After Children (LAC), children eligible for free school meals and Pupil Premium.

> *"We learn about dyslexia and we learn about autism and we learn about classroom practise and what have you, but we don't learn that there are more children who have got brain injuries than have got ADHD, ASD, dyslexia, so they're very much the underrepresented group."*
> *(Participant 1)*
>
> *"We started putting things in place locally, to make sure that children with brain injuries would be known to the educational psychology service. So the paediatricians would feed in that information, we would get consent to keep a list."*
> *(Participant 2)*

> *"I don't really know of any [LAs] that have a neuro specialist. And why not? Why is that not a post? ... I think it could very helpfully be one of those specialisms alongside all the other specialisms that we might have."*
> *(Participant 2)*

Participants one and two described that there can be hope and expectation that following an ABI the child can, or should be able to continue their lives as they did prior to injury. There can be a lack of understanding that this may not be possible. The hidden element of the difficulties experienced may be contributing to these unrealistic expectations.

> *"He just said, you know, he's just got to crack on with it. Well, he can't just crack on with it. His brains been splattered a bit."*
> *(Participant 1)*
>
> *"He's just carrying on with all his plans. What he was going to do in September. And funnily enough, it's not working."*
> *(Participant 2)*

Participants described the rapid onset of need for children with ABI and that, in most cases, the changes that are observed could not have been predicted. This is particularly pertinent to those who suffer a TBI who can, almost instantaneously, become totally debilitated with the possibility of never recovering. This rapid onset has wider implications in regards to sense of loss for both the CYP, their family and the wider community.

> *"there are children who have been in accidents and all kinds of things that are leading to radical change."*
> *(Participant 4)*

> *"It's not the same child as before the injury ... after the injury, they really become a different person."*
> *(Participant 3)*

4.3.3 Theme three: The Role of the EP

Participants described working in a range of employment contexts. The scope of their work with CYP with ABI appeared to be influenced by the employer and the commissioner of the work, with some EPs being involved discreetly for an EHC needs assessment and others completing much longer-term work, over the course of several years. Despite the variation in the work being undertaken, participants described feeling as though they had developed a range of skills throughout their training and as part of their broader role which are transferable to their work with CYP with ABI. This meant that to some extent, the work being undertaken with CYP with ABI did not require additional skills or knowledge but application of existing practise to a broader context.

This theme consists of three subthemes: The employment context, the scope of the work and ‘same same, but different’.

4.3.3.1 The employment context

Participants described working in a range of employment contexts including Local Authority, private practise, neurological rehabilitation, NHS, medico-legal companies and strategic work nationally. There was a sense that those with an interest in ABI tend to move away from the LA context.

Participants two and five explicitly mentioned that there are a range of contexts within which EPs can be employed when considering working with CYP with ABI.

> *“There are a range of employment options for EPs working with ABI.”*
> *(Participant 2)*

> *The neuropsychologist who came to talk to us was very much presenting an alternative way of working as an educational psychologist and how we could work across health settings and things like that."*
> *(Participant 5)*

Participants alluded to the fact that EPs with a particular interest in ABI tend not to remain in LA work. There was a sense that once additional knowledge was acquired this was better able to be utilised in a setting that offered more regular and varied opportunities to undertake work with CYP with ABI, and that perhaps this extra knowledge and skill was somehow wasted in the LA context.

> *"[those who knew more than me] had all stepped into the NHS or into the clinical arena, or they were working as expert witnesses. Nobody was doing it as a jobbing EP, working in with schools and families doing the job, doing assessments and interventions."*
> *(Participant 2)*
>
> *So, one of my colleagues who was really interested in it (neuropsychology) and wanted to take it further. She ended up working for the 'Young Epilepsy' [charity], for example, and another one went off to work for Sue Ryder"*
> *(Participant 6)*

Participant 4 appeared to make a link between additional learning and the employment context, suggesting that additional learning may be helpful in particular contexts and less of a requirement in others.

> *"there are some really interesting professional development courses out there for EP's who perhaps wanting to move into a more specialist kind of neuropsychological career path."*
> *(Participant 4)*

Participants from across the range of employment contexts described the way in which children with ABI would be referred to them for work. A range of referral routes were described, including through the child's school, through health services and via a Case Manager (when there was an insurance or negligence claim). The range of referrer options appeared to vary depending on the employment context and service delivery model.

> *[They] "happened to be in the school that I was the Link EP for, so that's how that came through."*
> *(Participant 1)*
>
> *"If they've (the case manager) identified that an Educational Psychologist would be useful, they come to the organisation that I work for and then the organisation will identify which EP it would be good to take that on."*
> *(Participant 7)*

4.3.3.2 The scope of the work

Participants described the range and scope of the work they were involved in, in relation to CYP with ABI. The range of work appeared to be influenced by the employment context, hence this subtheme is closely aligned to 'the context of the work'. Additionally, the nature of the injury and the commissioner of the EP time also played a part in the extent to which participants were able to engage in work of this nature and over what time period. There was a sense that there is some inequality regarding access to support and some participants reported discrepancies between both what they expected their role to be and what it was, and what others might have thought was their role. This was particularly in relation to the completion of standardised assessments.

When describing work that they had undertaken within the LA context, several participants reported working with CYP with ABI for the purposes of an EHC needs assessment, suggesting limited scope for involvement within this context.

> *"I was asked to write [statutory] psychological advice for a young man who had an ABI."*
> *(Participant 4)*
>
> *"Both pieces of work predominantly related to EHCP needs assessments."*
> *(Participant 6)*

Participants who had experience working in a range of contexts outside of the LA, described a greater breadth of work which spanned a broader age and ability range. Work outside of the LA context was mostly described as longer term (up to five years) and involved the EP engaging in delivering interventions rather than simply making recommendations.

> *"I can use all of my training and knowledge as an EP, to recommend and do whatever I think would be useful rather than some of the constraints that you sometimes have in local authority work… the nice thing about this work is that it would be expected to be long term work "*
> *(Participant 7)*

There was a sense among participants' responses that there can be limitations placed on the scope of the work which can lead to some inequality in support for CYP. Participant 1 described their experience of working with a CYP with an ABI within a traded model of service delivery. They felt that the LA should provide something additional as the traded time would not be sufficient.

> *"That school I think probably had about three days over the course of the year, so it was me saying to my boss at the time, we can't just give that school three days. We have to take this from something else. And we just pulled it from the statutory pot."*
> *(Participant 1)*

Participants also gave a sense that the cause of the ABI could impact the recourse for support. For example, children who had been in an accident and had an injury claim, or those who had medical negligence case were often provided with support through the use of financial compensation which enabled a greater breadth of work. This was not the case for children who acquired a brain injury through illness, who were often supported solely through the statutory system.

> *"[there is a] post code lottery of who gets what and how ... Because at the moment there are still pockets within those (pathways) that can get access to funding like major trauma funding because they've had for example of traumatic brain injury. But if you've had a stroke or a brain tumour or encephalitis or meningitis or something along those lines you might not have a pathway and no automatic access to rehab. So there is an inequity still, even within the type of injury that you have."*
> *(Participant 5)*

Participants four and six described how the scope of the work varied from their own expectations and the expectations of others. This related specifically to the use of cognitive assessments.

> *"I think they might have been anticipating I'd go running in with some kind of standardised assessment, but I'm afraid I was not interested in doing that in any possible way."*
> *(Participant 4)*

> *"My roles were, interestingly, different to what I thought they would be ... I was sitting there thinking we'd do the NEPSY, the WISC and things and things like that. But by the time I came across them (the CYP) I found out that had already been done. So in actual fact it worked out quite differently to what I was intended".*
> *(Participant 6)*

4.3.3.3 Same same but different

The subtheme 'same same, but different' relates to participants comments regarding the nature of their work with CYP with ABI and how they are able to utilise their existing qualities, skills and knowledge and apply it to working in this area. There was a sense that the core skills of an EP are sufficient to work in this area, that a deeper understanding of brain anatomy is not required and that EPs will already be demonstrating skills that are applicable to this work.

Whilst participants considered that it is important for EPs to have an understanding of brain development they did not suggest that this should extend beyond that which is taught to all EPs. There was a sense that a greater depth understanding could "take us out of our lane" (participant 4), and that this could detract from the human element of the work preventing one from remaining curious to understanding the lived experience and subjective reality.

> *"You want to encourage colleagues to understand that you don't have to know loads of neuro stuff to be able to identify need. If I think about some of the children and young people I work with, for example, really often things that come up are fatigue and things that come up are, this child or young person is using loads of coping strategies to get by and so we as a professional, as a school, need to come up with the stuff that we should do so they don't have to keep coping.*

> *That's not scary brain stuff that you that you need some sort of high level degree qualification for."*
> *(Participant 7)*

Participant 4 was also explicit in their expression that a lack of knowing can be an attribute that supports the work.

> *"I think my confidence in this area comes from comfort in not knowing everything, not being an expert, but actually being able to sit alongside a family and walk alongside their lived experiences. So I didn't feel like I needed much more than that to be able to be confident in that domain."*
> *(Participant 4)*

Most participants commented to the similarities between their work with CYP with ABI and the broader work of an EP. They acknowledged that they had skills they could draw on and took confidence from this. They described how they did not do anything particularly differently to what they would usually do as they always made decisions regarding the detail of the work on a case-by-case basis. Working with CYP with ABI did not mean that participants had to discard their usual practise, rather they continued to apply their psychological skills in person centred way.

> *"The core skills that we have as an EP are entirely transferable to a wide range of contexts."*
> *(Participant 4)*

> *"In a lot of respects it's no different to my other pieces of work that I would have been doing with children of that sort of age as well."*
> *(Participant 6)*

> *"So much of it is just stuff that EPs are already very familiar with, you know?"*
> *(Participant 7)*

Participant 3 reflected on the personal qualities and attributes which they hold and consider to be an important facilitator in their success in working in this area, suggesting it is less about the volume of specialist knowledge and more about the broader attributes held by EPs.

> *"I was an open person … keen on listening… I just wanted to listen to [others and] figure out a solution … I can really attribute it (my work in this area) to my personality" (participant 3)*

In addition to explicit comments regarding the 'sameness' of the work, participants described the difficulties associated with ABI that they had supported (e.g. fatigue and executive functioning), which they were familiar with through their wider work. They described how approaches they would recommend for children with these difficulties did not alter due to ABI cause and therefore existing knowledge and skills apply.

> *"Things like errorless learning are really, really helpful and the good old fashioned precision teaching actually works a treat with a lot of children with ABI."*
> *(Participant 2)*

4.3.4. Theme four: It takes a village to raise a child; The importance of working with others

This theme consists of four subthemes: Collaboration is key, school, CYP and family and health.

4.3.4.1 Collaboration is key

Participants described the importance of working with others in this area for the purposes of information sharing, knowledge building and creating networks. Whilst they talked specifically of working with families, schools and health professionals, which will be presented in the sub themes that follow, they also spoke more generally about the importance of collaboration.

Participants described the importance of building relationships with other psychologist's with whom they could share knowledge. The nature of this learning was bi-directional and highly valued by participants. One participant described setting up an interest group in their geographical area, when there wasn't already one in existence.

> *"I set up my own, just locally ... we used to meet once a term and it was clinical psychologists working in CAMHS working in community Clinical Psychology and Ed Psychs from local authorities that were interested. So I think sometimes if it's not out there, you've got to go out and make it happen".*
> *(Participant 2)*

Participants also described the large networks of professionals that were often involved in supporting CYP with ABI including Speech and Language Therapists, Occupational Therapists, Physiotherapists, Clinical Psychologists, School Nurse, Social Workers and hospital staff, in addition to schools and families. There was a sense of needing to generate cohesion among these, often large support networks in order to collaborate on shared goals and aspirations.

> *"To bring different parts of the system together around the child, so there's a real sense of a team and a collaboration rather than lots and lots of different people all doing their own thing."*
> *(Participant 4)*
>
> *"Everyone has to be seen as part of that system, so that was, let's work as a system; school, me, the child, the multidisciplinary team, the local authority."*
> *(Participant 1)*

The involvement of so many professionals left some participants wondering about their unique contribution as an EP in the MDT (linked to 'uncertainty' subtheme) and there was a sense of wondering what else they could provide when several professional reports were already available. Additionally to the EP themselves wondering about what they might be able to contribute there was a sense that the size of the MDT and number of professionals already involved might reduce the likelihood of the EP being brought on board.

> *"If a child has an acquired brain injury, there's often quite a lot of professionals around the family and the person and they think that's enough, and therefore we don't need the Educational Psychologist."*
> *(Participant 6)*

The following three subthemes build on the subtheme of collaboration and relate to specific parts of the system.

4.3.4.2 School

There was a sense that schools lack understanding and can be resistant to change, and that the EP role is in helping them re-calibrate what is reasonable to expect and pursue and that there may be a change in priorities. Participants also made reference to the volume of information that can accumulate with regards to CYP with ABI. There is a need to make sense of the information from an educational perspective and bridge the gap from health to school, which the EP is well placed to do.

Participants one and four described their experiences of school staff being anxious regarding supporting CYP with ABI and that part of the EP role can be in containing the emotions of others within the system.

> *"There are lots of things that can provoke a bit of anxiety for schools. I think when they're wanting to get it right."*
> *(Participant 4)*
>
> *"I think a lot of what I have experienced out in out in the field, is managing teachers, teaching assistants, fears."*
> *(Participant 1)*

Participant 1 also described how they had been met with some resistance from schools in regards to both accepting children into the environment and of providing differentiated support that was re-calibrated to expectations of the pupil that differed from what they were capable of prior to their injury.

This links to the earlier points raised about unrealistic hopes and expectations, likely related to pre-injury capabilities and a lack of awareness of the hidden disability element of ABI.

> *The school were saying "The child can't go late to class because [they've] got to have [their] access to the National curriculum ... if you don't give [them] a brain break [they're] not going to be able to focus. It's managing the expectations between what the child needs with what the school are prepared to put in."*
> *(Participant 1)*

Participants five and six described the role they had played in interpreting the information contained within other professionals' reports into something meaningful for the school.

> *"Clinical psychologists, you know, Great Ormond Street. They were making these recommendations and it was really hard for the school to unpick. How are they going to be implemented in the classroom?"*
> *(Participant 6)*
>
> *"She (the clinical psychologist) didn't have the capacity for that (talking through the implications of the report on education) ... we set up an arrangement whereby my role was about translating that knowledge into interventions and practice."*
> *(Participant 5)*

Similarly to the 'same same, but different' sub-theme within the role of the EP, participants described supporting schools to identify appropriate strategies that they have in place across their school already, to support children with a range of needs. Whilst the school may not have supported a child with an ABI (knowingly) before, the needs that result from ABI are not unique and participants encouraged schools to think about the broader skills and experience they have that might be applicable. This was somewhat about "just demystifying" (participant 5) for them.

> *"What are the processes that you've already got that you've possibly used for other children that you didn't realise you actually have that you could implement".*
> *(Participant 1)*
>
> *"Connecting them with the fact that their resources and their strengths and their skills that they have as a school that they do well, that would actually really apply. Connecting them with, do you know what, this might feel new to me or an unknown, but these are the things that work."*
> *(Participant 5)*

4.3.4.3 CYP and family

This subtheme relates to the participants expression of a need to work closely with the CYP and their families, to ensure that the CYP feels listened to and that their priorities and hopes for the future are considered in planning. There was a sense from participants that they valued being able to give enough time to the family in order that they were able to share their story and feel as though their lived experience had been understood.

Nearly all of the participants discussed the importance of eliciting the views of the CYP and of understanding what it is that is important to them, when thinking about their future, as a way of orienting their work.

> *"It always comes down to children and young people and what they want and how will we know whether or not we're doing what we need to do to be able to help them to achieve their goals".*
> *(Participant 5)*

For participant 3, it was important to be able to develop a relationship with the CYP in order support the effectiveness of the work with them.

> *"you have to create some kind of a rapport with them."*
> *(Participant 3)*

Participant 6 described some work they completed with a young person who had already undergone considerable assessment. Despite the volume of information available about the child it appeared that "nobody had ever really asked them about what they wanted" and therefore their role became about "trying to find out what was relevant and trying to find out in actual fact what was it that the child wanted".

> *"We put on a table every single strategy that was being used to support [them] in the classroom ... so we sat we put them into two piles; helpful / not helpful ... if they weren't helpful, I'd ask for some sort of description about why do you think they're not helpful? what's stopping them from working for you?"*
> *(Participant 6)*

The role of the CYP's family was also considered by participants. It was important for participants to engage with the family for bi-directional purposes. Some positioned the family as the experts and expressed a need to place as much emphasis on the views and wishes of the family, as on the professionals in the multi-disciplinary team. Others expressed that part of their role has been to support the family to understand the child's difficulties.

> *"Relying on the expertise and lived experience of the family and the child that you're supporting."*
> *(Participant 4)*

> *"I help families and young people to understand."*
> *(Participant 5)*

4.3.4.4 Health

The subtheme of health was most prominent during the interview with participant 5, perhaps due to the context of their employment experience. Despite the limited extent to which working with health professionals was relevant for other participants, it was considered of importance to include on the basis of suggestions for increased collaboration with NHS services and ways in which this may be achieved, particularly for EPs working within the LA context.

Participant 5 described ways in which they actively sought links with local health care professionals for the purpose of supporting the CYP on their journey from the medical setting back into education following an ABI and how this could best be facilitated through a joined up approach.

> *"Reach out to where your major trauma centre is because there will be a major trauma centre that is linked to your local authority area. Have conversations with them ... More often than not, I think if an EP service went and said to the major trauma service, is there any chance you could come and speak to us about acquired brain injury and what those pathways look like and actually, you know, we'd like to maybe think about what those pathways could look like back into education and how our educational psychology service could be involved in that, I think they would bite your hand off."*
> *(Participant 5)*

Participant 5 also described how collaboration with health care professionals helped to de-mystify language through which a shared understanding could be developed. They reported experiencing situations in which health and education professionals would use different terminology to mean the same thing and how a greater understanding of the health system can make it easier to provide support to CYP and families.

> *"There's still things that I come across that I'm like, do you mean? And then we'll have different words for it, but we basically mean the same thing. So that translation of languages, it has been a really, really important one, and I've learned a lot about the health system that I just didn't know before, and when you know that it makes it so much easier to support families, to navigate it as well."*
> *(Participant 5)*

Participant 4 also described an opportunity they had to link with local health services through their attendance at a training event at the local hospital. They described how this helped them in approaching a case where the pupil had a life limiting ABI and enabled the development of relationships across disciplines.

> *"our local hospital services put on an event for allied professionals around supporting children, particularly children with cancer. But it was very much relevant to children who have experienced illness ... I did feel it had relevance to children with ABI ... we learned a lot about the supports that health services offer and we were able to reflect on ways in which our service could support children ... that information that the NHS Trust shared meant that I had a good foundation of ideas to draw on, especially around provision but generally around approaching the case ...It also meant we had some really helpful relationships and connections with staff within that team."*
> *(Participant 4)*

4.3.5 Theme five: Facilitating factors

The final theme relates to factors described by participants as facilitating their confidence in this area of work. It provides suggestions regarding additional learning, despite the barriers identified in 4.3.2.2, draws on collaboration (4.3.4.1) in regards to others as a source for learning and highlights the importance self-interest played in developing the confidence of the participants included in this research. ‘Same same, but different could have also been considered a facilitating factor but it was decided this fitted more appropriately within the ‘the role of the EP’.

This theme consists of three subthemes: Access to additional learning, learning from others and ‘where there is a will there is a way’.

4.3.5.1 Access to additional learning

Participants described having accessed additional learning in relation to neuropsychology from a range of sources. Some had attained additional formal qualifications including a Post Graduate Diploma (PGDip), the UCL course in paediatric neuropsychology and the BPS Qualification in Clinical Neuropsychology (QiCN). Others made reference to the fact that access to CPD had supported their confidence in working in this area. Mention was also made of some helpful resources that expanded participants knowledge in this area, including a range of charity resources with information on the topic of ABI and other specific textbooks. A reference list, including all of those mentioned is provided in chapter 5.

Several participants made specific reference to receiving CPD and how this has been a facilitator for learning and subsequently confidence.

> *"I've been really fortunate as well to get a lot of CPD."*
> *(Participant 5)*

> *"You can see how having confidence comes from having done some sort of CPD".*
> *(Participant 7)*

Other participants made reference to reading as a source of learning. This included reading books specifically on neuropsychology and neurorehabilitation and reading resources related to specific injuries provided by brain injury and illness charities.

> *"A lot of my initial research was done through buying books".*
> *(Participant 1)*

> *"I've got specific books ... there's a book about neurorehabilitation of acquired brain injury for children and young people ... there's also another great book called Developmental Neuropsychology, a Clinical Approach."*
> *(Participant 7)*

4.3.5.2 Learning from others

Participants described the role that others had played in their learning journey, including other psychologists and those from a broad range of disciplines who have also worked in neuro-rehabilitative care. The ability to connect and share information with others was considered important for the purposes of learning and supporting confidence.

For some participants this simply meant an opportunity to hear from a range of voices.

> *"They had paediatricians talking, they had parents talking from lived experience and they made a video about a young woman who had been treated for cancer and then returned to school."*
> *(Participant 4)*

Participants four and five spoke of the importance of developing relationships with others and how this can provide opportunities for further learning. Once these relationships were established participants were able to utilise opportunities for less formal, more incidental learning, at times simply by being in close working proximity to a broad range of professionals. Cross discipline working also meant that participants had the relational basis from which to seek support, clarification and advice and knew who to approach that might be able to provide this.

> *"So many people are working with those young people incredibly well and it's utilising their knowledge and their skills."*
> *(Participant 5)*

Particular reference was made by several participants regarding supervision as facilitator for learning. For some participants this was formal supervision and for others it was less formal. Supervision was described as a means through which participants could grow in their practise, talk through their thoughts and reflections and process the, at times, emotional weight of the work.

> *"What springs to mind and what I really made a huge amount of use of ... Is supervision."*
> *(Participant 4)*
>
> *"Supervision has really helped me to grow in my practise."*
> *(Participant 5)*

4.3.5.3 Where there is a will there is a way

All participants described how their interest in neuropsychology and ABI had played a role in their development of confidence. For some their interest led to the pursuit of work and for others, an interest stemmed from initially engaging in the work incidentally. Two participants also mentioned having personal experience of ABI. This had given them a different insight and level of understanding and had perhaps endeared them to both the work and to this research. Several participants described the active role they had taken to enhance their learning in this area seeking opportunities and learning rather than passively waiting for it to be delivered.

> *"I've always had a real interest in neuropsychology."*
> *(participant 1)*
>
> *"It was driven by me and my interest."*
> *(Participant 5)*

4.3.6 Summary of phase 2 (qualitative) findings

The findings from phase two revealed a range of work EPs are doing with CYP with ABI. However, the scope of the work is influenced by the employment context and cause of injury. For example, CYP who had access to funding through a medicolegal claim received greater access to ongoing support from the EP, whereas other involvement could be ‘one off’, for the purposes of an EHCNA. Those interviewed described a range of factors that contributed to their confidence working in this area, including: the medical and political context and extent to which ABI is recognised and prioritised; access to further learning and CPD; the importance of working with and learning from others, including the CYP and family; the applicability of broader EP skills; a sense of not needing to be an expert in this area; and taking a personal interest.

5. Discussion

5.1 Chapter overview

This chapter will discuss the findings of the research in the context of existing knowledge and literature. This will be presented in response to the research questions asked. Implications of the research will be considered for the EP profession and more widely and the strategy for disseminating the findings, to ensure impact, will be outlined. The strengths and limitations of the research will be highlighted and suggestions for the direction of future research given. The researcher will also provide a reflective account of their experience of undertaking the research.

5.2 Discussion of findings

The findings of this research will now be discussed in the context of existing literature and knowledge. The limited amount of literature published for an EP audience and with the use of EPs as a participant group means that broader comparisons will be drawn, for example from research undertaken with school staff and in light of the current national landscape for EP work. The discussion will be presented in response to the research questions.

5.2.1 What work do EPs undertake with CYP with ABI?

EPs reported engaging in a range of work with CYP with ABI including assessment, consultation, intervention and training; all of which form part of the core functions of the EP role (HCPC, 2023). The most common types of work undertaken by the participants in this research were assessment and consultation. Participants working within the health or medico legal sector described a broader scope of work than those in LA practice and the range of work carried out was linked to the employment context. Whilst no identified research considers the differences across these contexts specifically, Lee and Woods (2017) found that those working in traded LA services provide a broader scope of work than those in non-traded, suggesting context is a factor. Perhaps therefore, this finding is reflective of the EP role more broadly. EHC needs assessment work is increasingly becoming the most dominant task for LA EPs (Atfield et al., 2023) and parent/teacher consultation is often completed alongside assessment for the purposes of this work. This might account for the high and corresponding numbers of participants who reported assessment and consultation as the focus of their work, with several participants interviewed citing EHCNA's as the purpose of their involvement with children with ABI. This finding supports that of Bozic and Morris (2005) who reported that the majority of LA EP professional involvement related to statutory processes. The more recent, unpublished work of Renton (2023) also found EHC psychological advice to be the most common method of involvement, with consultation being the second most common involvement type.

A total of eight participants in phase one indicated that they had provided training on ABI to school staff. Interestingly, all of these reported having had access to CPD in relation to ABI, seven had worked in a specialist setting and five had additional qualifications in neuropsychology. It could be that participants delivered training as part of their role in a specialist setting, supporting the finding that the scope of the work is linked to the employment context. It may also be that, due to the impact of additional learning and CPD on confidence, participants felt more able to offer training, as they were confident in their ability to provide this effectively.

The frequency with which participants reported working with CYP was also, perhaps unsurprisingly, contingent on employment context. Those who reported daily or weekly frequency were all employed outside of the LA context. The majority of participants reported annual, or less frequent than annual work in this area and four participants reported never having worked with a CYP with ABI. Given the prevalence of ABI and the range of SEN needs it can cause, these findings are perhaps reflective of its hidden nature; something which was attended to by the participants interviewed. Participants described suspecting that CYP they had worked with may have had an ABI and mentioned that school staff would need to be aware of this in order to bring it to their attention. Given that the majority of SENCo's in Howe's (2017) research reported having no experience of working with a child with an ABI, perhaps a lack of knowledge and awareness among school staff is further 'hiding' CYP from EP view. Furthermore, even when school staff are aware of an ABI they are not always seeking support from an EP (Bate et al., 2021) and EPs may feel uncertain about the unique contribution they can make, particularly when there is already a MDT involved.

5.2.2 How confident do EPs feeling when working with CYP with ABI

The majority of participants in phase one reported that they would feel confident to undertake consultation or assessment work. As reported above, these were also the most commonly reported work types, which may indicate that engaging in the work increases confidence, as was suggested by one participant interviewed. Engaging in the work was also considered a supportive factor in Linden at al. (2012) and Howe (2017) who found that experience working with a child with ABI was a more reliable predictor of knowledge than receipt of training. Furthermore, participants in the current research reported the lowest confidence in relation to training which was also the type of work that had been engaged with the least.

In light of the 'same same but different' subtheme in phase two, it may be that participants feel their general skills in consultation and assessment are more easily applied to work with CYP with ABI without the requirement for specific knowledge in this area, such that would be required for delivering training. Several consultation models propose that the power balance within consultation is desirably equal (Kennedy & Lee, 2021; Newham & Ingraham, 2017; Shein, 1988) and that the consultant does not need to take an 'expert' or 'one-up' position in order for the process of consultation to be effective. All EPs will be aware of these facets of successful consultation (BPS, 2023; HCPC, 2023). Thus, it may be that participants' confidence in their ability to deliver effective consultation per se, impacted their confidence when asked specifically about consulting for a child with ABI. Conversely in the delivery of training the power balance is invariably tipped towards the trainer as the expert who is looked towards to provide something unique, which may contribute to participants' lack of confidence in this area, particularly if they do not feel they have sufficient knowledge to impart.

5.2.3. What factors influence EPs confidence levels with working with CYP with ABI?

5.2.3.1 The wider context

Similarly to the finding of Bozic and Morris (2005) the majority of participants reported that ABI was not covered as part of their initial EP training, suggesting that despite the time lapse, little has changed in regards to teaching content in this area. The low numbers reported by Bozic and Morris (2005) may have been due to the fact that their research was carried out before the introduction of the Doctorate programme (AEP, 2022; UCL, 2016) extending the training to three years and prior to the introduction of the SEND code of practice, (DfE, 2015) which emphasises a more joined up approach between education and health. However, despite 21 participants in the current research completing their training in the last five years, just seven reported being delivered teaching on ABI. Participants in Renton (2023) also cited "insufficient focus in the training programmes for EPs" (Pg 48) as among the barriers to knowledge and confidence. Therefore, despite increased national attention, including the launch of a publication to help professionals involved in supporting CYP return to education, (N-ABLES, 2021), the Time to Change report recommendation that a minimum level of awareness and understanding among educational professionals is needed (APPG, 2018), and a government commitment to publishing a cross departmental ABI strategy (A Strategy for Acquired Brain Injury, n.d.) the teaching provided to TEPs in this area does not appear to have increased over time.

Bozic and Morris (2005) reported no difference in coverage across training providers or geographical area. Whilst the limited sample size in this research did not allow such comparisons be drawn, participants described suspecting that there is currently variation across providers in regards to the extent to which teaching on ABI is provided to TEPs. If university courses are looking to EPs with additional qualifications in the field of neuropsychology to deliver this training to TEPs, it may be that these are easier to find in particular geographical areas. However, advances in technology and the increase in virtual leaning, particularly post the COVID-19 pandemic, should provide a platform for increased equal opportunity in this area.

Whilst the participants in this research felt that more emphasis should be placed on the teaching of ABI to TEPs, it is important to note that this is a topic of particular interest to them and this is therefore, perhaps unsurprising. Whilst there is currently no mention of ABI in in the standards for the accreditation of Doctoral programmes (BPS, 2023), which sets the core competencies trainees are required to demonstrate in order to qualify, there is also no mention of Autism Spectrum Disorder (ASD), (which is often used a point of prevalence comparison), or any other specific medical need. Rather than make reference to particular conditions, the competencies refer to the four broad areas of need outlined within the SEND CoP (DfE, 2015). Despite the Time to Change report (APPG, 2018) recommending the inclusion of ABI with the CoP, no revision of this has been publicly announced.

Participants described recognising an increase in research into ABI within the EP profession with some mentioning taking part in other TEP research. Whilst this is positive, it does not appear that this research has made it to publication, at least not within journals intended for an EP audience and it is unclear why this is. It may be that the recency of the research means it is yet to reach publication.

5.2.3.2 Barriers

Participants described a range of barriers affecting their confidence when working with CYP with ABI. These included a sense of feeling uncertain about the support they could provide and their unique contribution within an, often large, MDT, barriers to accessing further learning and good quality CPD and the hidden element of ABI. Similar findings were made by Renton (2023) who explored the barriers to meeting the needs of CYP with ABI. This perhaps suggests that the barriers to developing EP confidence are closely aligned with those that affect the extent to which CYP with ABI get their needs met.

Participants' responses to being asked to complete a piece of work with a child with an ABI felt notably emotive, with the use of words such as "anxiety" and a sense that EPs were questioning what they might be able to contribute. A scoping search was completed in attempt to determine whether these feelings might similarly arise for EPs when working with other specific medical conditions, however no literature was identified and as such, comparisons cannot be drawn.

The onset of ABI can be rapid, unexpected and shocking, and the effects devastating. There is often a sense of uncertainty and unknown regarding the recovery trajectory (The Children's Trust, 2024a; The Children's Trust, 2024d) which is likely to be felt among the individuals within the child's system, particularly parents and school staff. This uncertainty and unknown may also be a contributory factor to the anxiety expressed by some participants in this research, as mentioned above. Some EPs reported a need to respond to explicit expressions of anxiety from school staff and as such provide containment; that is the process of receiving and holding the distressing thoughts of another (Bion, 1985). Perhaps, through providing this containment EPs received the projected[9] anxiety of school staff and reflected this within their contributions to this research.

Whilst some participants had obtained additional qualifications in neuropsychology, a range of barriers to access, including cost, time and supervision were highlighted. The fact that UCL are currently the only institution in the UK to offer a BPS accredited qualification in clinical paediatric neuropsychology, is also likely to present as a barrier to access for many, based on geography. Bozic and Morris (2005) found CPD activities to be the primary source of learning for participants in their research and almost half of participants in phase one of the current research had received CPD in relation to ABI. Despite this, there was a sense from some participants interviewed that quality CPD can be difficult to source and some reported limitations in that which they had received. Whilst no previous research has explored the quality or effectiveness of CPD for EPs in this area, research by Bate et al. (2021) found that SENCos had difficulty sourcing professionals with adequate levels of expertise locally and Bennett et al. (2022) reported a lack of, or delay to training as the most common barrier to schools supporting CYP with an ABI. This suggests that access to good quality CPD from relevant professionals may be a barrier across educational disciplines and therefore consideration should perhaps be given to what other professions may be in a better position to provide this.

Whilst it appeared that participants regarded additional qualifications highly, it was not clear what in particular they valued about this. Whilst several of the most confident participants were those who had

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[9] Projection refers to the unconscious process of placing one’s uncomfortable emotions onto another (Freud, 1937) as a means to protect oneself from the unknown (von Franz, 1985).

obtained additional qualifications, this was not the case for all, suggesting that further qualifications are not necessary to support confidence. Furthermore, not all participants who had experience working in specialist settings had completed further qualifications, indicating that additional qualifications are not required to take up all specialist positions.

Participants demonstrated an awareness that the prevalence of ABI is high, however, acknowledged that this is widely not understood and there was a sense that CYP with ABI are under advocated for in terms of services and pathways, particularly in comparison to other conditions such as ASD, ADHD and dyslexia. Despite estimations that as many as one child in every classroom has an ABI (The Children's Trust, 2024c) the frequency with which EPs in this research reported working with CYP with ABI was low, particularly when accounting for the removal of participants working within specialist settings.

Participants described how the expectations placed on CYP following an ABI can be unrealistic and demonstrative of a lack of understanding regarding the implications. Drawing attention to the hidden element of ABI is not a finding unique to this research. Hawley (2004) found that special arrangements tended to be made for physical differences, which invariably are visible, and Linden et al. (2012) and Howe (2017) reported high levels of uncertainty among educators regarding the effects of ABI on development, suggesting, as do the findings of this research, that many misconceptions remain. Furthermore, the sleeper effect (Nasen, 2018; The Children's Trust, 2024d) can mean that the child appears to be fully recovered, until the onset of difficulties later in their development. At this time arising difficulties may be incorrectly attributed, particularly if an ABI is unknown.

5.2.3.3 The role of the EP

The majority of participants reported working within the LA context, which is representative of EP employment more broadly (BPS, n.da) and the extent to which employment context may influence the scope of EP work has been explained above (5.2.1). The findings of this research suggest that the EP role in the domain of ABI remains unclear, perhaps more so within the constraints of the LA and that there can be misalignment between what work is expected of the EP, what they initially expect they will do, and what the work ends up being.

The role of the LA EP tended to be in the EHCNA process and the use of cognitive assessments arose within the findings of this research. Whilst the use of such assessments can be a part of the EP role (BPS, 2023) there is much debate about the utility of these assessments (Fletcher & Miciak, 2017). EPs are responsible for how they use their knowledge and skills (BPS, 2021a) which includes their use of assessment, and despite the initial expectation either of themselves or of others, no EP reported using a standardised assessment within their work with CYPs with ABI. For some participants this was because such assessment had already been completed by a Clinical Psychologist within an inpatient setting. Others gave the impression that they did not consider this the most appropriate course of assessment and that dynamic assessment, pupil views work or consultation was better suited to achieving their assessment aims.

Despite previous research identifying the importance of the CYPs return to school (Bate et al., 2021) and the crucial role the EP should play in this (Ball & Howe, 2013), none of the participants in this research described providing support in this area (although it is acknowledged that this was not explicitly asked about). There was a general sense that some inequalities remain in regards to which children are able to access support and for how long and whilst there continues to be no nationally agreed way in which children with ABI are recorded this is likely to continue.

It is hoped that when the ABI Bill (2021) is rolled out, assuming the provision for diagnosing and identifying ABI in schools is fulfilled, processes may be implemented that enable LAs to record and store data on ABI, such as they currently do for other vulnerable groups such as Looked After Children (LAC) and those on Pupil Premium (PP). With increased visibility of pupils with ABI the scope of work for EPs in this domain may increase and CYP will be better advocated for. Currently, EPs are mostly reliant on school staff bringing the injury to their attention and it may be that for many CYP with ABI the difficulties that result from the injury are not significant enough to warrant prioritisation. An increase in work in this area may, in turn, encourage more EPs with an interest in this area to remain in the LA context, as the findings of this research suggest that currently, they tend to move to employment in alternative contexts. The introduction of a specialist EP role within LA work might also further support this.

Despite some uncertainty, participants described an element of sameness between their work with CYP with ABI and their work with children with other SEND. Difficulties such as those associated with poor executive function, poor memory, emotional dysregulation and fatigue are not uncommon in children with ABI (Headway, 2024g Keenan et al., 2021; Krasny-Pacini et al., 2017) and these are difficulties that EPs will be used to supporting. Similarly to the findings of Bate et al. (2021) and Bennett et al. (2022) who reported that school staff drew ideas from their broader experience when working with ABI, participants in this research described a range of ways they could apply their broader skills and knowledge to work in this area. Whilst several participants had obtained additional qualifications, some were explicit in their expression that an extensive knowledge of neuro anatomy is not required. There was a sense from participants that being in a position of not knowing can be an attribute as it enables curious questioning and exploration of lived experience. Perhaps over intellectualising could be considered an unconscious psychological defense[10] against the emotional labour of the work.

5.2.3.4 The importance of working with others

The findings of this research highlight the importance of joint working with others, including families, school staff and a range of health professionals for the purposes of information sharing, knowledge building and providing effective support. The importance of good communication between the network surrounding the CYP is not a novel finding of this research. In 2004 Hawley et al. described how school staff were reliant on parents informing them of their child's injury and in 2013 Ball and Howe recommended a need for improved communication between professionals. In 2014 the Children's and Families Act was introduced which emphasised the importance of collaboration between education, health and social care and in 2021 Bate et al., described how school staff sought advice from a range of professionals and engaged in regular conversations with parents for the purposes of supporting CYPs needs. In contrast to the findings of Bozic and Morris (2005) who reported that EPs were often the only psychologists involved in contributing to planning for the child's education post injury, the participants in this research made reference to the involvement of Clinical Psychologists, perhaps indicating that there has been some developments over time.

Despite increased focus and recognition of the benefits of multi-disciplinary working, the findings of this research suggest that it is easier to achieve outside of the LA context, when a range of professionals from different disciplines work alongside each other regularly and within the same environment (e.g.

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[10] Psychological defense mechanisms are an unconscious reaction pattern employed to protect against anxiety (APA, 2018a)

a neurorehabilitation centre). Most neurorehabilitation for CYP with ABI takes place in schools (APPG, 2018) and most children return to mainstream schooling post ABI (Bate et al., 2021). It can be challenging to convene and maintain an effective multi-disciplinary approach when different disciplines may have differing, sometimes conflicting, priorities and different frameworks within which they must operate (e.g. LA, NHS etc) (The Open University, n.d). This is perhaps further compounded by recruitment and retention difficulties within several of the disciplines involved in supporting CYP with ABI, including EPs, Occupational Therapists and Speech and Language Therapists (Atfield, 2023; Royal College of Occupational Therapists, 2023; The Royal College of Speech & Language Therapists, 2023).

Effective communication and information sharing supports the success of a MDT (The Open University, n.d). and this is often better facilitated when a member of the team is assigned as a key person, responsible for co-ordinating and liaising between members. This perhaps accounts for the finding in this research that a multi-agency approach appears more apparent in the medico-legal context, when a case manager is responsible for overseeing and coordinating the different disciplines within the team.

5.2.3.5 Facilitating factors

Several participants reported having experience working with CYP with ABI either prior to, or since becoming an EP, some of whom had worked in specialist settings. This may account for the finding that the majority of participants were at least somewhat confident in their ability to carry out a range of EP work in this area. Previous research with school staff has also found that knowing or having taught someone with an ABI led to significantly increased knowledge and understanding when compared with those who had no experience (Linden et al., 2012; Howe & Ball, 2013; Howe. 2017).

In addition to experience, a facilitating factor for confidence described by participants in this research was their interest in neuropsychology; many recalled being active in seeking opportunities and resources for enhancing their learning. This finding is similar to that found by Howe (2017) who reported that most participants in their research sourced their training independently, for example through reading or the internet. It may be that those with an interest in this area seek knowledge which in turn supports confidence.

Learning from others, including the wider MDT and through supervision, something with which all EPs must engage, (HCPC, 2023) were identified as factors in participants' learning journey's. Therefore, consideration should be given to opportunities to engage with the wider network of support when work in this domain presents itself, and EPs should consider how they can deliver their support through this forum, rather than through assessment and consultation, which typically wouldn't involve the wider network of support. To this end, the motivation for this research is not that all EPs become specialists in ABI, but rather that all EPs feel confident enough to engage in this work, should it be presented to them and thus has explained whether this is currently the case.

5.3 Implications

In adding to the very limited research for EPs in this area it is hoped that this paper will go some way in supporting the professions understanding of ABI, including the prevalence, causes, possible associated difficulties and the sleeper effect. By increasing understanding in this area and raising the profile of children with ABI, EPs are increasingly likely to consider ABI within their formulations. Increased knowledge of the possible delayed effects might encourage EPs to ask questions about possible head injury earlier in life, when other professionals (e.g. school staff) may consider this earlier history less relevant. Additionally, where an earlier head injury is known about, increased knowledge will enable EPs to share this within the pupil's support network, which can support a shift in narrative.

Additionally to synthesising knowledge on prevalence, causes and difficulties, this paper draws together, and brings attention to developments that are occurring nationally including the government's commitment to publishing a cross departmental ABI strategy (A Strategy for Acquired Brain Injury, n.d.), which is likely to make reference to the EP role and have implications for both the training of EPs and the role they take with schools in relation to CYP with ABI.

Perhaps one of the most pertinent findings to come from this research, that might support EPs' confidence in this area, was the description from participants' that whilst there is a uniqueness about brain injury as a cause of SEND, the presenting needs are not distinctly different than those that present from a range of other causes (see chapter one). Therefore, EPs do not require knowledge and skills that are additional to those they already possess and utilise when working with children with other SEND needs. EPs should take confidence from these findings given that they routinely work with CYP with a range of needs and it is hoped that dissemination of this finding will support confidence among the profession.

The description of factors that support EPs to feel confident when working with children with ABI, should be used by EP services and training providers to plan learning opportunities in order to support the development of the workforce. Additionally, given that the findings of this research suggest that those who hold additional qualifications tend not to remain in LA work, consideration should be given to how LA EPs' can contribute when working with CYP with ABI.

At a local level, the findings of this research suggest that consideration should be given to developing systems between health and education services for the purposes of information sharing. Notifying education services of head injury incidents will enable in school monitoring of the longer term effects of the injury and provision of timely support. Given the often rapid onset of difficulties following more severe injuries LAs should also consider ways in which timely, appropriate support can be given to children upon their return to school, outside of the current lengthy EHCNA process.

The findings of this research highlighted a number of resources that may be of interest to EPs when tasked with supporting CYP or school staff in relation to ABI. To the researcher's knowledge, a reference list of these resources has not previously been published. In order for quick reference for readers looking for alternative sources of information a list of the resources identified through this research[11] is provided below:

- The Child Brain Injury Trust provides free training and resources at https://childbraininjurytrust.org.uk/
- The Children's Trust 'Brain Injury Hub', provides resources for families, teachers and those who would like to know more about ABI in children at: https://www.thechildrenstrust.org.uk/brain-injury-information
- The Children's Trust also have a range of free books and resources aimed and children and families at: https://www.thechildrenstrust.org.uk/brain-injury-information/info-and-advice/parents-and-carers/books-on-brain-injury
- N-ABLES ABI return publication: https://cdn.ymaws.com/ukabif.org.uk/resource/resmgr/return_to_education/return_to_education12_05_2021/abi_return_booklet.pdf

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[11] This list consists of all of the resources referred to by participants during interview and therefore provides a starting point. It does not claim to represent *all* resources available.

- Anderson, V., Northam, E., & Wrennall, J. (2018). *Developmental Neuropsychology A Clinical Approach (2nd Ed.).* Routledge.
- Walker, S., & Wicks, B. (2018). *Educating Children and Young People with Acquired Brain Injury.* Routledge.
- Reed, J., Byard, K., & Fine, H. (Eds.) (2015). *Neuropsychological Rehabilitation of Childhood Brain Injury: A practical guide.* Palgrave Macmillan
- Jim, J., & Cole, E. (Eds.) (2019). *Psychological Therapy for Paediatric Acquired Brain Injury.* Routledge.
- The Brain Tumour Charity have animations (known as Jake resources) explaining brain tumours designed for children at: https://www.thebraintumourcharity.org/living-with-a-brain-tumour/get-support/children-and-families-service/support-families/animations-explaining-brain-tumours/
- A range of charities also provide advice and information on a range of specific ABIs including: The Stroke Association, Meningitis Now, The Encephalitis Society, Oscars Paediatric Brain tumour charity.
- LEARNet by the Brain Injury Association of New York State is a website providing resources for teachers, clinicians, parents and students: http://www.projectlearnet.org/index.html

5.4 Dissemination of findings

In order to ensure that the implications of this research are as widespread as possible a range of dissemination strategies have been considered.

Firstly, at an individual level, participants who were involved in the research will be provided with a copy of this written thesis in writing, following approval of a final version through the VIVA process.

The researcher also received two specific requests via email at the recruitment stage, from potential participants who asked that the findings be shared with them; those requesters will be provided with a copy.

Secondly, at a local level, the findings of this research will be shared within the researcher's current EPS, during a CPD event in the summer term of 2024. The audience of this event will be assistant EPs, Trainee EPs and qualified EPs. In addition to presenting the findings of the current research some of the contextual information contained within chapter one will be highlighted. The purpose of this is to make EPs aware of the nature and prevalence of ABI in childhood in the hope that they begin to consider this within their consultations with families and thus their formulations about CYP. It is intended that the findings of this research in relation to the importance of multi-agency working, be used by the researcher in their employment to establish communication links between education and health. The researcher hopes to implement processes that mean that CYP who experience ABI are recognised and identified within education and that professional links with relevant health colleagues are established. In the first instance this is likely to involve contacting Nottinghamshire EPS who already have an established pathway for 'making a successful return to education' following an ABI (Nottinghamshire County Council, 2017), to establish the processes in place there.

The researcher would also like to present the findings of this research to other TEPs at the Tavistock and Portman NHS Trust research presentation afternoon in July 2024. The rationale for this is similar to that described above in terms of educating future EPs about the prevalence, associated difficulties of ABI and the sleeper effect. It is also hoped that by sharing this information with other TEPs who will be placed in varying LAs the findings will be disseminated more widely through word of mouth from TEPs into their placement services. Additionally, hearing about the research may inspire other TEPs to conduct research in this area.

As a means of disseminating findings nationally the researcher intends to amend the format of the written record of this research for the purposes of publishing in a peer-reviewed journal. In particular the researcher plans to approach journals that are intended for an EP audience namely, Educational Psychology in Practice and Educational and Child Psychology. These journals have been selected due to the limited literature published in these journals on the topic of childhood ABI, as highlighted through the literature review carried out in September 2022.

The researcher will also look for opportunities to present their research in the form of a presentation at events such as the BPS Department of Educational and Child Psychology (DECP) TEP annual conference, the Eastern Region's Conference and through the Association of Educational Psychologists (AEP) Reach Out webinars. Whilst it is acknowledged that presentations of this nature predominantly attract attendees who are interested in the topic, it is hoped that those who do attend may take the information forward and share the findings within their own employment contexts, thus reaching a wider audience.

Finally, following approval through the VIVA process this thesis will be made publicly available, in written form, through an online thesis repository. It is hoped those who might be interested in researching ABI in childhood in the future might look to the recommendations made in this report for inspiration regarding their own research and that momentum in the field of Educational Psychology and ABI will continue.

5.5 Researcher reflections

In addition to the specific reflective diary extracts that have been provided throughout this report, a number of broader reflections on the research journey have been made by the researcher and are detailed below, in first person.

5.5.1 Does this mean I am academic now?

A core belief that I have held about myself throughout the duration of the Doctorate training programme is that of being 'not academic[12]'. I think this stems from my childhood when attention was drawn to my personal attributes rather than my academic achievements and then cemented when I left school and realised my academic achievements were nothing to 'write home about' when compared to those of others. Whilst I acknowledge that there is somewhat of a juxtaposition between being a TEP and the feeling of being 'not academic', this feeling has continued to infiltrate my experience.

The pending completion of a Doctoral piece of research and the thought of a potential publication is significantly challenging of this core belief. There is a sense that through conducting this research, the culmination of the trainee experience, my sense of identity is going to be somewhat shattered and I am going to need to find a way to move forward in acceptance that I am perhaps, 'academic' now. Whilst you may be reading this and thinking that can only be a good thing, to have proved yourself wrong in that way, there is also a sense of loss involved.

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[12] The researchers meaning of academic refers to their capability to excel at scholarly pursuits and activities.

Upon reflection I consider that my sense of feeling ‘not academic’ is intrinsically linked to my confidence (or lack of). I have a tendency to become anxious about the unknown and being faced with a blank page can leave me questioning my capability to achieve the task. As the page begins to fill, and my ideas formulate and solidify, I begin to convince myself that I can do it. My confidence in my ability is something that has been brought to my attention during both personal and research supervision. My initial research supervisor commented that I lacked confidence in my ability. My second research supervisor described noticing that when faced with each new, unfamiliar task, my confidence appeared low. However, they observed that as I moved through the task my confidence grew and I became more confident in my decisions. I began to notice this pattern in myself and this insight supported me to move through the latter chapters. Whilst I still approach the task lacking confidence in my ability to complete it, I do so more secure in the knowledge that my confidence will grow as the task progresses and have come to trust in the process more. I am hopeful that this journey of self-learning will continue to support me to accomplish tasks in my future career that might initially feel outside the scope of what I consider achievable for myself.

It is interesting to me that my primary research reflection is around the concept of confidence, given this is the focus of the questions within the research. I wonder if my own lack of confidence is what drew me to research in this area. Perhaps by hearing the factors that supported the EPs in my sample feel confident I hoped that I would gain some insight into how I could become the more confident EP that I aspire to be. It was reassuring that some of the themes arising from the research related to utilising existing skills, knowledge, and to some extent attributes, as a basis for building confidence, as these are foundations I can use to build upon in developing my own confidence in practise.

5.5.2 In the role of researcher

Taking up the role of the researcher within the qualitative element of this research was a novel experience and reflections on the role of 'interviewer' and the power imbalances of this are noteworthy. According to Anyan (2013) the concept of power within the interview can be determined by "socioeconomic status, educational or professional background and gender or ethnic identity". All participants were practising EPs and thus held a position of power over me as the researcher, in regards to education/professional background. Whilst as the researcher I held some power in relation to the interview, I was also aware that I was seeking something from participants who I placed in a position of knowing. In this respect I felt I held less of the power. I reflected on how this differed from the usual day to day life of a TEP working the field when others are often looking to me to provide something as a perceived 'knower', about something they consider themselves not to know. I noticed how I felt the power imbalance more strongly in some interviews, compared with others. I wondered why this might be. Given my core belief of 'not academic' I reflected on whether I felt more in awe of those participants with additional qualifications. Did I place them in a higher position of power compared with those participants who were perhaps more like me? (e.g. those practising in LA, or who revealed that they had personal experience of ABI).

During the analysis and write up phases of the research I tried hard to ensure that all participants were represented fairly and given equal voice as much as possible. I felt a sense of responsibility to 'catch myself', and check if I was placing greater weight on what was said by participants whom I had placed a greater amount of power. Whilst I recognise that researcher influence is not something to be negate in RTA, I hoped that by bringing it to my conscious awareness, for example by checking representation when considering what quotes to include, I could demonstrate the reflexivity needed to ensure that this was, if not minimised, at least recognised (e.g. here in these reflections).

From the outset I had wondered whether participants had been drawn to this area of interest due, like me, to personal experience. When personal experience was mentioned by one participant early on I felt my hypothesis might be met. However, I reminded myself that I needed to remain open minded and that I couldn't look for, or over represent themes based solely on what I had hoped I might find in the data. When a further participant mentioned experience of ABI, more subtly than the first, I reminded myself of my researcher role. I placed some safe parameters around the mention of this for the participant. This included asking them if they would feel comfortable to confirm whether the person they were referring to was a child or adult, and reassuring them that they should only share if they felt comfortable and that I would not ask them to say any more. They acknowledged and appreciated this and it was not further discussed. I felt proud of my ability to inhibit a desire to ask more questions and to remain in role and with the primary task. Whilst I have briefly included the mention of participants personal experiences in the write up of the results, I have been careful not to over represent this. I am however, conscious that in an attempt not to over represent, there is also a risk of under representation. I also reminded myself that I am not an 8th interview participant. I am in the unique position of researcher.

5.6 Research Limitations

This research adds to the very limited existing research base in the area of education and childhood ABI and is just the second piece to have utilised EPs as the sole participant group since Bozic and Morris (2005) almost 20 years ago. Unfortunately the response rate for phase one of the research was much lower than that obtained by Bozic and Morris (2005) and only represents approximately 1.5% of the EP population. The extent to which the findings of this research can be considered representative of the EP population more broadly are therefore limited due to the small sample size.

The low response rate for phase one also limited the utility of the mixed method design. It had initially been intended that statistical analysis of phase one data would be completed to consider the relevance of factors such as length of time as an EP, training institute and employment context on confidence. Unfortunately the low response rate meant that this was not possible and as such phase one of the research primary served as a function for identifying participants for phase two.

Unfortunately, due to the cyber-attack on the British library and subsequent unavailability of EThOS it was not possible to include all relevant thesis within the literature review as these were not accessible. The private acquisition and inclusion of one particular thesis resulted in inconsistent application of the inclusion criteria for the systematic review and thus reduces its replicability.

Phase one of the research asked participants to rate their confidence level using a 5-point Likert scale, however, a definition of 'confidence' was not provided and as such the validity and reliability of the findings of this phase are limited. Participants will have approached the questions with their own subjective and it cannot be assumed that confidence meant the same for each responder.

Whilst the majority of participants in phase one reported working in the LA context, the decision to utilise the most confident participants for phase two meant that those with additional qualifications and experience were over represented in the sample, when compared to the broader EP population. Whilst it was felt that participants who were most confident would be able to provide richer detail regarding factors that supported their confidence, the extent to which these factors may be accessible to EPs within a broader range of contexts is questionable. To this end, the generalisability of the findings are limited due to the inclusion of EPs from a range of employment contexts.

Whilst the criteria for this research included ABI that was both moderate and severe, the descriptions of the children participants interviewed had worked with were indicative of severe injury. It may be that factors that support confidence when working with CYP with severe ABI are different to those that support confidence with less severe injury and therefore caution should be applied in regards to generalisability. For example, it may be assumed that greater confidence is needed to work with a CYP with a severe ABI compared to a mild or moderate ABI and therefore participants might express greater confidence in their ability to work with those with mild or moderate ABI. This might alter or decrease the factors required to support confidence in this work.

Due to the lack of previous studies in this research area the researcher opted to complete dual purpose research utilising a mixed methods design. Whilst this approach has supported the exploration of EP work with CYP with ABI in greater depth and breadth and provided a response to multiple research questions, this approach also has some limitations. In addition to the aforementioned limitation with this research specifically, the use of mixed methods approaches also have some broader limitations including the extent to which each element of the research can be discussed within a length restricted piece. Additionally, the time taken to complete the distinct phases of the research, including the analysis, limited, to some extent, the number of participants that were able to be included and the researcher was not able to invite all those who expressed an interest to interview. It is acknowledged that the inclusion of a greater number of participants interviewed may have provided greater breadth to the findings.

Finally, the researcher took the decision to ask about participants work and confidence in relation to assessment, consultation, intervention and training, the rationale being that these are core functions of the EP role (BPS, 2023). Participants were not explicitly asked about their role in supporting CYPs return to school, despite previous research suggesting that it is crucial the EP plays a role in this transition (Ball & Howe, 2013).

5.7 Directions for further research

Given the very limited research published in the area of ABI for an EP audience,. it is hoped that the findings of this research will be used as a base from which further research within the profession can build, in order that the knowledge and research base, particularly in regards to ABI in education can grow. There are a range of directions that further research in this area could take. Below are some possible suggestions.

This research examined the work that EPs are doing with CYP with ABI and identified factors that contribute to their confidence when undertaking this work. A theme that arose as both a barrier and facilitator for confidence was access to further learning and good quality CPD. Whilst some participants suggested there is good quality CPD available others struggled to bridge learning into in their practise. To this end, a more detailed exploration of the CPD that is available, the elements that EPs found most useful and why, and suggestions for what would constitute good quality CPD, may aid in the development of future CPD and further support EPs confidence in this area.

To consider the impact of additional knowledge on confidence, and in recognition of the finding that knowledge and awareness of ABI continues to remain to some extent hidden, a piece of action research may be useful. Taking pre and post measures alongside delivering an information giving training or workshop would help to establish whether increased knowledge in the area of ABI is sufficient on its own, in supporting confidence.

To identify knowledge gaps and training needs of the EP workforce in this area, an audit of knowledge, similar to that carried out with school staff (Bennett et al., 2022; Howe, 2017; & Linden et al., 2012) specifically designed for EPs may be of use. This may also include an audit of what is currently being provided to TEPs as part of their training, as participants gave a sense that this is varied; whilst there is currently no reference to ABI in the Doctoral training standards (BPS, 2023) this is likely to remain the case. A skills and knowledge audit would support a move towards more equitable learning opportunities being provided to trainees and in the development of future planned CPD.

This research identified the importance of joined up working and findings suggest that the EP can play a unique role at the intersection of the health and education. Some participants described positive joint working between health colleagues and EP services and one described a system in which a record of children with ABI was kept within the local authority. Research that utilises a case study design, in an area in which there is already good practice established would be helpful in highlighting how effective joint working was established and is maintained as an example for other LA's to follow.

Whilst this research included ABI that was classified as moderate or severe, the descriptions participants provided of the children they had supported were indicative of severe injury. As advances in the ability to detect less severe injury continue, the scope to research expands. There has been an increase in research in the health arena regarding the long term effects of mild head injury, particularly regarding the link between sports induced concussion and future risk of neurodegenerative conditions such as Alzheimer's and Parkinson's (Alzheimer's Society, 2023; University of Glascow, 2019). The educational impact of minor injury is also worthy of attention and research focusing on the long term effects of mild or moderate injury may further highlight the need to bridge the gap across the health and education disciplines.

EPs based in specialist settings were purposefully included within this research as it was considered that they would bring unique experiences that would add value to the description of factors that contribute to confidence. Despite these benefits the number of participants with specialist experience is likely to have skewed the findings. Given that most EPs work within the LA context (BPS, n.da) and most children with ABI are educated in mainstream schools (Bate et al., 2021), research which focuses on the perspectives of LA EPs may be worthwhile.

Finally, the findings of this research highlighted the importance of pupil voice, something which is distinctly lacking from the research base. Whilst the ethical challenges of working with such a vulnerable group are recognised, this is not a reason for research to be avoided. Understanding the lived experience of being a child in education with an ABI, would support EPs when considering the usefulness and purpose of their work and may give them a greater sense of confidence.

5.8 Conclusion

In utilising a mixed method design this research aimed to examine the national landscape regarding work that EPs are doing with CYP with ABI and how confident they feel when undertaking this work. The origins of this research stemmed from the researchers personal experience of ABI and subsequent realisation of the very limited literature published for an EP audience.

This research has drawn together the existing knowledge base with regards to childhood ABI and education. This will go some way in supporting EPs understanding of ABI prevalence, causes, possible associated difficulties and the sleeper effect. It also draws attention to national developments in the field of ABI.

Assessment and consultation are the most common forms of work undertaken by EPs with CYP with ABI and are the forms of work EPs feel most confident about delivering. Most participants indicated that they would not be confident about delivering training in relation to ABI.

The scope of work available to EPs is dependent on the employment context, with LA work tending to be mostly restricted to psychological advice for EHCNAs. Private employment contexts enable a greater breadth of work which is often carried out over longer timeframes. The cause of the injury also often determines the avenue through which CYP are able to access support. EPs with an interest in ABI tend to move away from LA settings to pursue a greater breadth and depth of work elsewhere.

Overall the findings of this research suggest that ABI is under recognised and that CYP with ABI are less advocated for when compared with children with other SEND. This is likely to be in part due to a lack of understanding regarding the delayed onset of need. The creation of neuro specialist EP roles within LA contexts is likely to increase advocacy for, and understanding of, ABI in childhood.

Whilst there is a uniqueness about ABI as a cause of SEND the presenting needs are similar to those that present from a range of causes. Given that EPs routinely work with CYP with a similar range of needs the core skills of the EP (e.g. in consultation) are sufficient to work in this area. A deeper understanding of neuro anatomy is not required and not knowing can be an attribute. EPs should take confidence from the fact that they possess a range of skills they can draw from that are applicable to working with CYP with ABI.

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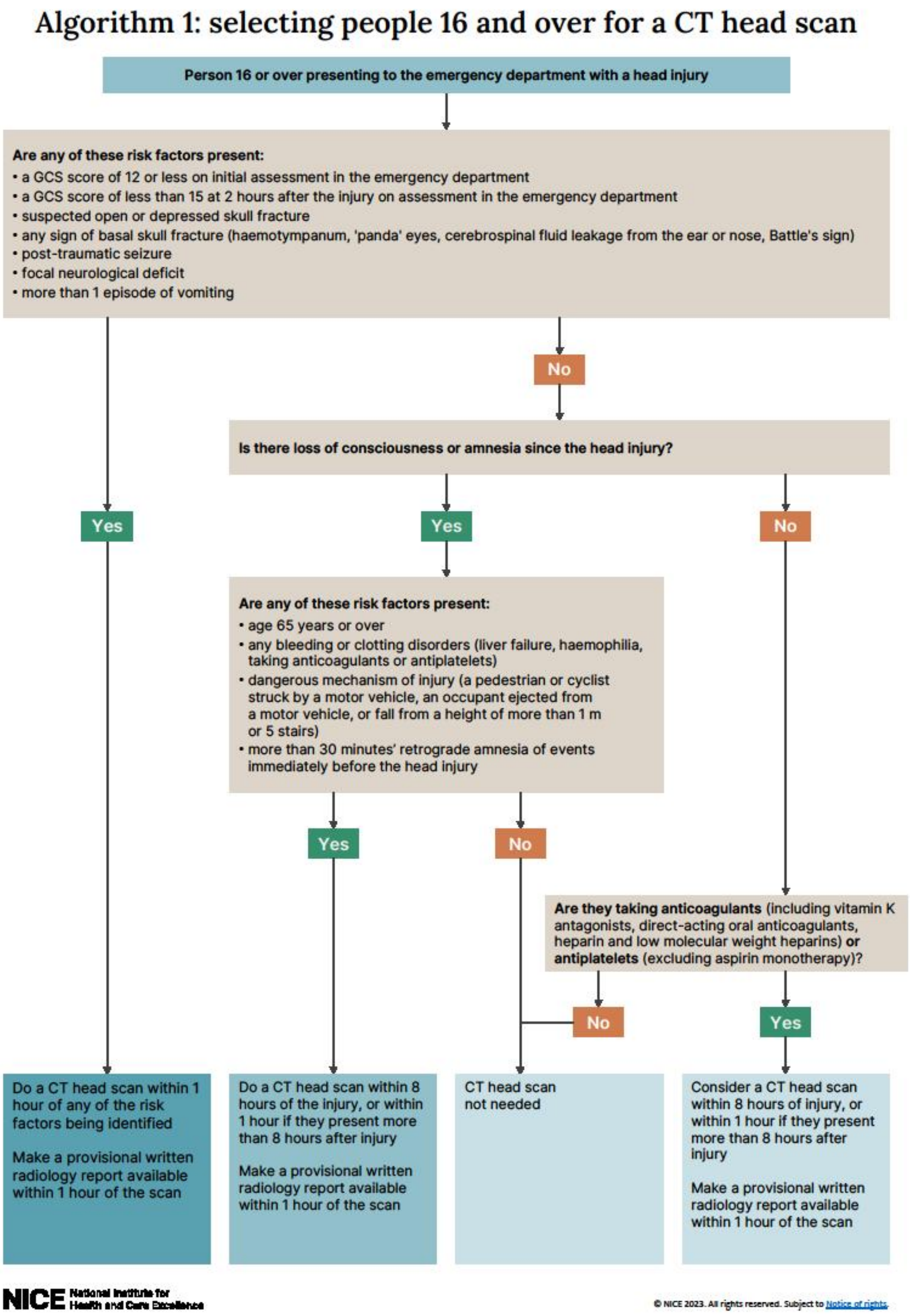
Appendices

Appendix A: NICE Criteria for selecting CYP for a CT head scan



Algorithm 1: selecting people 16 and over for a CT head scan

Person 16 or over presenting to the emergency department with a head injury

Are any of these risk factors present:
- a GCS score of 12 or less on initial assessment in the emergency department
- a GCS score of less than 15 at 2 hours after the injury on assessment in the emergency department
- suspected open or depressed skull fracture
- any sign of basal skull fracture (haemotympanum, 'panda' eyes, cerebrospinal fluid leakage from the ear or nose, Battle's sign)
- post-traumatic seizure
- focal neurological deficit
- more than 1 episode of vomiting

Is there loss of consciousness or amnesia since the head injury?

Are any of these risk factors present:
- age 65 years or over
- any bleeding or clotting disorders (liver failure, haemophilia, taking anticoagulants or antiplatelets)
- dangerous mechanism of injury (a pedestrian or cyclist struck by a motor vehicle, an occupant ejected from a motor vehicle, or fall from a height of more than 1 m or 5 stairs)
- more than 30 minutes' retrograde amnesia of events immediately before the head injury

Are they taking anticoagulants (including vitamin K antagonists, direct-acting oral anticoagulants, heparin and low molecular weight heparins) **or antiplatelets** (excluding aspirin monotherapy)?

Do a CT head scan within 1 hour of any of the risk factors being identified

Make a provisional written radiology report available within 1 hour of the scan

Do a CT head scan within 8 hours of the injury, or within 1 hour if they present more than 8 hours after injury

Make a provisional written radiology report available within 1 hour of the scan

CT head scan not needed

Consider a CT head scan within 8 hours of injury, or within 1 hour if they present more than 8 hours after injury

Make a provisional written radiology report available within 1 hour of the scan

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Appendix B: Systematic literature review search table

Completed on 23.06.2023		**Total no. of papers**	**Number of papers after limiters**								
Search No.	**Search terms**		**Date 2013-2023**	**Written in English**[13]	**Based in UK**[14]	**Academic Journals**	**Peer reviewed**	**Full text available**	**Databases psych info/ERIC/Education source**	**Duplicates removed**	**Reading titles and abstract**
1.	'Brain injury' AND 'child*'	591, 131	339, 546	333, 013	1306	1229	1176	749	7669	-	-
2.	'Acquired brain injury' OR 'traumatic brain injury' AND 'child*'	534, 419	326,740	321, 313	992	949	907	554	5972	-	-
3. [15]	'Brain injury' AND 'child*' AND	206, 839	123, 398	121, 795	717	682	654	423	4631	-	-

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[13] Refined using the 'language' filter, by selecting 'English'.

[14] Refined using the 'geography' filter, by selecting 'United Kingdom'.

[15] Green text denotes the lowest number papers identified from that set of searches

	‘Education’										
4.	‘Brain injury’ AND ‘child*’ AND ‘Education’ OR ‘School’	38, 328, 775	19, 600, 454	18, 878, 756	110, 057	78, 387	74, 865	40, 023	779, 546	-	-
5.	‘traumatic brain injury’ OR ‘acquired brain injury’ AND ‘child*’ AND ‘education’.	619, 137	383, 574	370, 291	1052	1001	951	564	10, 946	-	-
6.	‘traumatic brain injury’ OR ‘acquired brain injury’ AND ‘child*’	38, 663, 282	19, 802, 029	19, 069, 043	110, 379	78, 688	75, 146	40, 174	738, 861	-	-

	AND ‘education’ OR ‘school’.										

Combining searches (Search with ‘AND’)											
Completed on 23.06.2023		**Total no. of papers**	**Number of papers after limiters**								
Search No.	**Search terms**		**Date 2013-2023**	**Written in English**	**Based in UK**	**Academic Journals**	**Peer reviewed**	**Full text available**	**Databases psych info/ERIC/Education source**	**Duplicates removed**	**Reading titles and abstract**
1.	‘Brain injury’ *Combined with* ‘child*’	591 135	348, 089	341, 504	1306	1229	1176	749	7669	-	-
2.	Acquired brain injury’ OR ‘traumatic brain injury’ *combined with* ‘child*’	298, 607	180, 505	177, 267	687	660	630	401	4642	-	-
3.	‘Brain injury’ ‘child*’	206, 839	123, 398	121, 795	717	682	654	423	4631	-	-

	‘Education’ *combined*										
4.	‘Brain injury’ ‘child*’ ‘Education’ OR ‘School’ *combined*	341, 813	200, 654	198, 230	961	898	861	557	6572	-	-
5.	‘traumatic brain injury’ OR ‘acquired brain injury’ ‘child*’ ‘education’ *combined.*	119, 410	72, 204	71, 308	388	374	354	228	2809	-	-
6.	‘traumatic brain injury’ OR ‘acquired brain injury’ ‘child*’ ‘education’ ‘Psych’ *combined.*	99, 246	60, 442	59, 708	345	338	320	204	2535	-	-
7.	‘traumatic brain injury’ OR ‘acquired brain	185, 246	111, 040	109, 753	508	490	465	301	4029	-	-

	injury' 'child*' 'education' OR 'school', *combined.*										

Refined the date range to 2015-2023
Justification: Brain injury is largely considered a health issue and the first EHCP's were issued in 2015 following the implementation of the new children's and families act which emphasised a more joint up approach between education, health and care professionals.

Completed on 23.06.2023		**Total no. of papers**	**Number of papers after limiters**								
Search No.	**Search terms**		**Date 2015-2023**	**Written in English**	**Based in UK**	**Academic Journals**	**Peer reviewed**	**Full text available**	**Databases psych info/ERIC/Education source**	**Duplicates removed**	**Reading titles and abstract**
1.	'Brain injury' AND 'child*'	591, 223	300, 602	294, 992	1047	993	953	626	6209	-	-
2.	Acquired brain injury' OR 'traumatic brain injury'	212, 048	111, 854	109 584	406	391	380	241	3191	-	-

	AND ‘child*’										
3.	‘Brain injury’ AND ‘child*’ AND ‘Education’	206, 881	105, 878	104, 482	569	545	523	345	3810	**-**	**-**
4.	‘Brain injury’ AND ‘child*’ AND ‘Education’ OR ‘School’	38, 331, 311	16, 565, 397	15, 967, 389	85, 416	63, 296	60, 603	33, 091	638, 392	**-**	**-**
5.	‘traumatic brain injury’ OR ‘acquired brain injury’ AND ‘child*’		328, 921	317 692	877	835	796	495	8940	**-**	**-**

	AND ‘education’ .										
6.	‘traumatic brain injury’ OR ‘acquired brain injury’ AND ‘child*’ AND ‘education’ OR ‘school’.	38, 665, 846	16 737 794	16, 130, 262	85, 687	63, 548	60, 840	33, 229	641, 885	**-**	**-**
7.	‘traumatic brain injury’ OR ‘acquired brain injury’ AND ‘child*’ AND ‘education’	611, 241	325, 339	314, 139	864	824	786	486	8900	**-**	**-**

	AND 'Psych'										

Refined the databases search to psych info[16] and ERIC[17] (previously also including Education source[18]) **Justification:** Pragmatics. Trying to reach a number of search results that is feasible to manage in terms of reading titles and abstracts. Education Source was providing the highest number of results, potentially because it had the broadest scope and thus may be the most likely to be providing more, less relevant papers.											
Completed on 23.06.2023		**Total no. of papers**	**Number of papers after limiters**								
Search No	**Search terms**		**Date 2015-2023**	**Written in English**	**Based in UK**	**Academic Journals**	**Peer reviewed**	**Full text available**	**Databases psych info/ERIC**	**Duplicates removed**	**Reading titles and abstract**
1.	'Brain injury' AND 'child*'	591 223	300 602	294 992	1047	993	953	626	1583	**-**	**-**
2.	Acquired brain injury' OR 'traumatic brain injury' AND 'child*'	671, 731	356, 721	345, 195	934	891	850	537	5696	**-**	**-**

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[16] An abstracts database the provides systematic coverage of the psychological literature from the 1800's

[17] The education resources information centre – online digital library of education research and information

[18] Education source is a leading full text database designed for education students researchers and policy makers

3.	‘Brain injury’ AND ‘child*’ AND ‘Education’	206, 881	105, 878	104, 482	569	545	523	345	203	**-**	**-**
4.	‘Brain injury’ AND ‘child*’ AND ‘Education’ OR ‘School’	38, 331, 423	16, 565, 514	15, 967, 461	85, 418	63, 298	60, 605	33, 093	353, 867	**-**	**-**
5.	‘traumatic brain injury’ OR ‘acquired brain injury’ AND ‘child*’ AND ‘education’.	619, 223	328, 922	317, 693	877	835	796	495	5638	**-**	**-**

6.	'traumatic brain injury' OR 'acquired brain injury' AND 'child*' AND 'education' OR 'school'.	38, 665, 959	16, 737, 912	16, 130, 335	85, 689	63, 550	60, 842	33, 231	357, 115	-	-
7.	'brain injury' AND 'child*' AND 'education' AND 'Psych*'	162, 818	89, 931	82, 876	481	469	450	300	119		

Combining searches (Search with 'AND')										
Completed on 23.06.2023		**Total no. of papers**	**Number of papers after limiters**							
Searches	**Search terms**		**Date 2015-2023**	**Written in English**	**Based in UK**	**Academic Journals**	**Peer reviewed**	**Full text available**	**Databases psych info/ERIC**	**Duplicates removed**	**Reading titles and abstract**
1.	'Brain injury'	591, 223	300, 602	294, 992	1047	993	953	626	1583		

	Combined with ‘child*’										
2.	Acquired brain injury’ OR ‘traumatic brain injury’ *combined with* ‘child*’	298, 649	155 454	152 720	554	535	514	344	1027		
3.	‘Brain injury’ ‘child*’ ‘Education’ *combined*	206, 881	105 878	104 482	569	545	523	345	203		
4.	‘Brain injury’ ‘child*’ ‘Education’ OR ‘School’ *combined*	341, 873	171, 892	169 791	759	722	694	463	1058		
5.	‘traumatic brain injury’ OR ‘acquired brain injury’	119, 436	61, 775	61, 011	316	306	289	192	151		

	‘child*’ ‘education’ *combined*.										
6.	‘traumatic brain injury’ OR ‘acquired brain injury’ ‘child*’ ‘education’ ‘Psych’ *combined*.	99270	51868	51 260	283	277	261	172	91		
7.	‘traumatic brain injury’ OR ‘acquired brain injury’ ‘child*’ ‘education’ OR ‘school’, *combined*.	185, 227	94, 895	93, 804	411	399	380	256	716		
8.	‘Brain injury’ ‘Child*’	162, 818	83, 931	82, 876	481	469	450	300	119		

	‘Education’ ‘Psych*’ *combined*										

Completed on 06.07.2023		**Total no. of papers**	**Number of papers after limiters**								
Searches	**Search terms**		**Date 2015-2023**	**Written in English**	**Based in UK**	**Academic Journals**	**Peer reviewed**	**Full text available**	**Databases psych info/ERIC**	**Duplicates removed**	**Reading titles and abstract**
1.	“brain injury” AND “child*” AND “educational psych*”	98,321	48, 123	47, 526	294	292	275	188	111	111	5

Completed on 31.08.2023		**Number of papers after limiters**									
Searches	**Search terms**	**Total no. of papers**	**Date: 2015-2023**	**Written in English**	**Based in the UK**	**Academic Journals**	**Peer reviewed**	**Full text available**	**Databases ERIC**	**Duplicates removed**	**Reading titles an abstracts**

1.	“child*” AND “brain injury” AND “school OR education” AND “support”	9, 564, 883	4, 441, 208	4, 303, 830	40, 707	30, 944	29, 997	17, 165	31, 307		Scanned first 100 and none of relevance

Completed on 01.08.2023		**Total no. of papers**	**Number of papers after limiters**								
Searches	**Search terms**		**Date 2015-2023**	**Written in English**	**Based in UK**	**Academic Journals**	**Peer reviewed**	**Full text available**	**Databases psych info/ERIC**	**Duplicates removed**	**Reading titles and abstract**
1.	‘brain injury’ AND ‘child*’ AND ‘education’ OR ‘school’ AND ‘Psych*’	8, 709, 465	3,994, 587	3,860,770	26,409	25, 055	24, 364	15,637	187, 640		

Completed on 06.07.2023		**Total no. of papers**	**Number of papers after limiters**								
Searches	**Search terms**		**Date 2015-2023**	**Written in English**	**Based in UK**	**Academic Journals**	**Peer reviewed**	**Full text available**	**Databases psych info/ERIC**	**Duplicates removed**	**Reading titles and abstract**
1.	"brain injury" AND "child*" AND "educational psych*"	98,321	48, 123	47, 526	294	292	275	188	111	111	3
Above search repeated on 01.08.2023 provided the following results											
		94, 943[19]	46, 852	46, 243	300	298	281	192	115	115	5

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[19] Red text denotes the search used for the final literature review

Appendix C: Research advertisement poster

Seeking qualified Educational Psychologists (EPs) to take part in research

Who am I?

My name is Shelley Brown and I am a year 2 trainee EP.

What is the research?

This is a mixed method study exploring the work that EPs are undertaking with children with aquired brain injury (ABI) and how confident they feel when undertaking this work.

Are you eligible?

Are you a qualified EP?
Are you pracitising in the UK?
You *do not* need experience working with children with ABI to take part

What am I asking of you?

Phase 1 is a questionnaire which takes up to 10 minutes to complete
Phase two involves an interview lasting approximately 1 hour
Taking part in phase 1 does not obligate you to take part in phase 2

Take part using the QR code or email me any questions using: Sbrown@tavi-port.nhs.uk

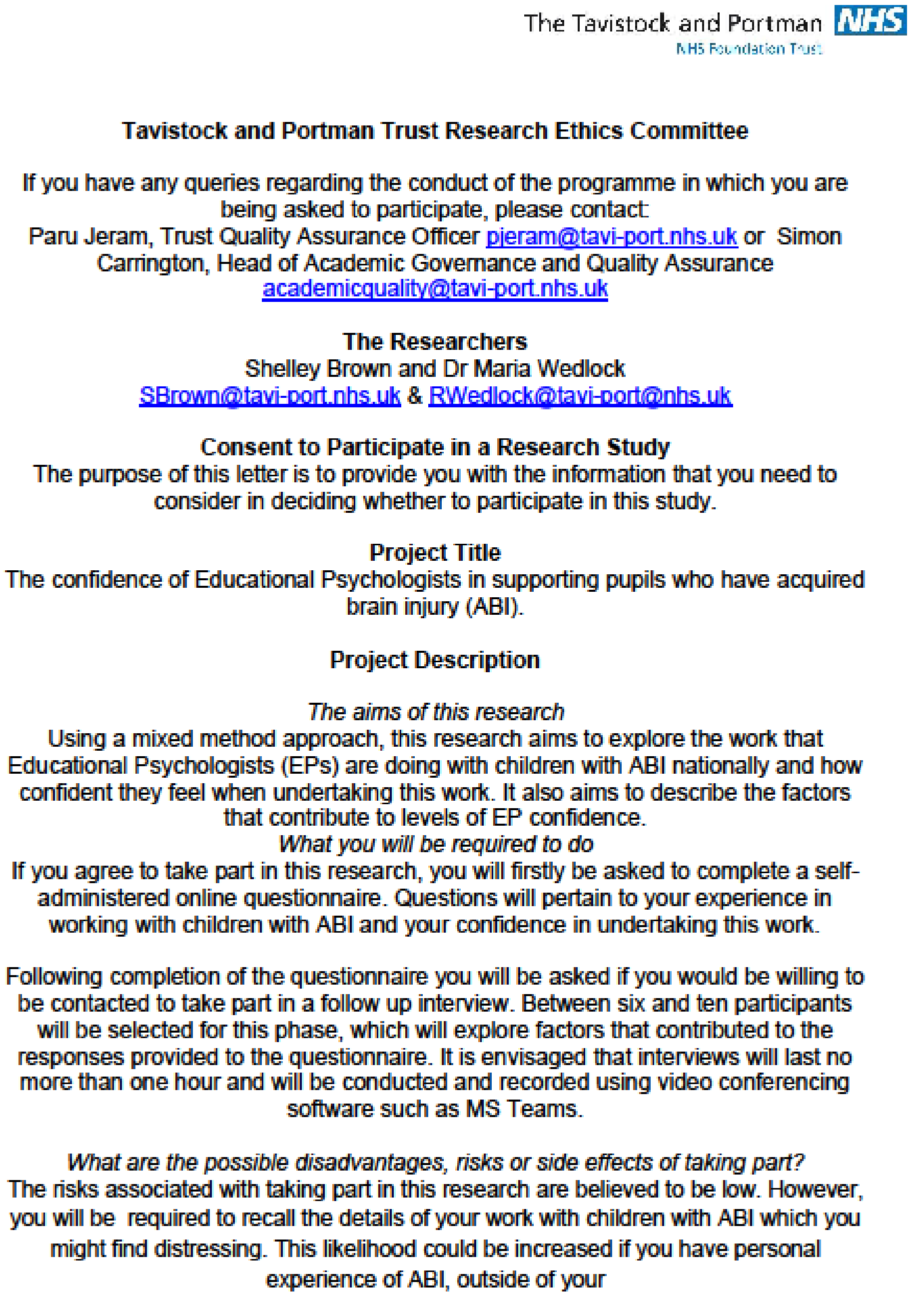
Appendix D: Questions asked in phase 1 and rationale for each

Question to be asked	**Rationale for asking question**
For how many years have you been practising as an Educational Psychologist?	This is likely to impact the volume and range of experience and thus, potentially confidence.
Did you complete your EP training via the Doctorate training route, or through a masters qualification?	Might expect those who completed doctoral training to have had more teaching on neuropsychology than those who qualified through a masters?
At which institution did you complete your EP training?	There may be differences in the teaching input and opportunities at different institutions. For example, the Tavistock offers a neuropsychology placement in year 3. This potentially provides EPs from this institution more exposure/experience pre qualification.
During the course of your training, were you delivered teaching on ABI? • Yes • No • Unsure	Might expect this to impact confidence.
Which of the following best describes your current employment: • Employed by a Local Authority • Working as an EP independently • Working within an NHS/Clinical setting with children with ABI • Working within an NHS/Clinical setting with a focus on something other than ABI?	Would expect experience to vary across different employment settings. Those with experience working in specialist settings are likely to have increased experience and confidence. Input from these participants is likely to be invaluable in establishing what might help raise confidence among the EP population more widely.
Prior to completing your training to become an EP, did you have any experience in working with children with ABI?	Pre qualification experience could be as (or more) relevant than post qualification in terms of impacting confidence.
Since completing your training to become an EP have you completed any additional qualifications in neuropsychology? If so, please specify which qualifications.	This could be a factor influencing experience and confidence
Since you qualified as an EP, have you worked in a setting that specialises in supporting children with ABI?	As above
Since qualifying, have you had access to CPD activities regarding ABI?	This could contribute to confidence
What work have you undertaken with a child with an ABI? • Consultation	Needed to establish the landscape of work being undertaken as this is a key part of the research.

• Intervention • Assessment • Training • Other (please describe)	
If you have undertaken consultation regarding a child with an ABI, how confident did you feel with this? • Not confident • A little confident • Somewhat confident • Confident • Highly confident	Establishing confidence is a key part of the research
If you have delivered intervention work for a child/children with an ABI, how confident did you feel with this? • Not confident • A little confident • Somewhat confident • Confident • Highly confident	Establishing confidence is a key part of the research
If you have completed assessments for a child/children with an ABI, how confident did you feel with this? • Not confident • A little confident • Somewhat confident • Confident • Highly confident	Establishing confidence is a key part of the research
If you have delivered training in relation to ABI, who was the audience for the training? If you have delivered multiple trainings, then please select all that apply. School staff EP’s Parents Other (please specify)	Establishing confidence is a key part of the research
How confident did you feel when delivering this training? • Not confident • A little confident	Establishing confidence is a key part of the research

- Somewhat confident - Confident - Highly confident	
How many cases have you worked on where the child had an ABI/how often have you worked with a child with an ABI	

Appendix E: Participant information sheet



The Tavistock and Portman NHS
NHS Foundation Trust

Tavistock and Portman Trust Research Ethics Committee

If you have any queries regarding the conduct of the programme in which you are being asked to participate, please contact:
Paru Jeram, Trust Quality Assurance Officer pjeram@tavi-port.nhs.uk or Simon Carrington, Head of Academic Governance and Quality Assurance
academicquality@tavi-port.nhs.uk

The Researchers
Shelley Brown and Dr Maria Wedlock
SBrown@tavi-port.nhs.uk & RWedlock@tavi-port@nhs.uk

Consent to Participate in a Research Study
The purpose of this letter is to provide you with the information that you need to consider in deciding whether to participate in this study.

Project Title
The confidence of Educational Psychologists in supporting pupils who have acquired brain injury (ABI).

Project Description

The aims of this research
Using a mixed method approach, this research aims to explore the work that Educational Psychologists (EPs) are doing with children with ABI nationally and how confident they feel when undertaking this work. It also aims to describe the factors that contribute to levels of EP confidence.
What you will be required to do
If you agree to take part in this research, you will firstly be asked to complete a self-administered online questionnaire. Questions will pertain to your experience in working with children with ABI and your confidence in undertaking this work.

Following completion of the questionnaire you will be asked if you would be willing to be contacted to take part in a follow up interview. Between six and ten participants will be selected for this phase, which will explore factors that contributed to the responses provided to the questionnaire. It is envisaged that interviews will last no more than one hour and will be conducted and recorded using video conferencing software such as MS Teams.

What are the possible disadvantages, risks or side effects of taking part?
The risks associated with taking part in this research are believed to be low. However, you will be required to recall the details of your work with children with ABI which you might find distressing. This likelihood could be increased if you have personal experience of ABI, outside of your

Appendix F: Participant consent form

The Tavistock and Portman NHS
NHS Foundation Trust

Consent to Participate in an Experimental Programme Involving the Use of Human Participants

The confidence of Educational Psychologists in supporting pupils who have acquired brain injury.

I have read the information leaflet relating to the above programme of research in which I have been asked to participate and have been given a copy to keep. The nature and purposes of the research have been explained to me, and I have had the opportunity to discuss the details and ask questions about this information. I understand what is being proposed and the procedures in which I will be involved have been explained to me.

I understand that my involvement in this study, and particular data from this research, will remain strictly confidential. Only the researchers involved in the study will have access to the data. It has been explained to me what will happen once the experimental programme has been completed.

I hereby freely and fully consent to participate in the study which has been fully explained to me. Having given this consent I understand that I have the right to withdraw from the programme at any time without disadvantage to myself and without being obliged to give any reason.

Participant's Name (BLOCK CAPITALS)
……………………………………………………………………….

Participant's Signature
………………………………………………………………………………………..

Investigator's Name (BLOCK CAPITALS)
……………………………………………………………………..

Investigator's Signature
……………………………………………………………………………………….

Date: ………………………….

Appendix G: Participant debrief sheet

The Tavistock and Portman NHS
NHS Foundation Trust

Thank you for taking the time to complete this survey exploring the work that EPs are doing with children with ABI. We appreciate all of your time and support in completing this.

As mentioned in the participant information sheet, this is a mixed method research design. Therefore, we are seeking participants who would be willing to take part in a follow up interview, exploring the factors that contributed to your responses provided here.

Interviews will likely take place over the summer holiday period, but the researcher can be flexible to accommodate those willing to take part. It is envisaged that interviews will last no more than one hour and will be conducted and recorded using video conferencing software such as MS Teams.

Please indicate if you would be interested in participating in a follow up interview.

If you have found participation in this research to be triggering and you are experiencing emotional distress, then you may wish to seek support from a mental health charity such as Mind or the Samaritans.

If there is anything further that you wish to discuss with respect to your participation in this research, please do not hesitate to contact the primary researcher, Shelley Brown on sbrown@tavi-port.nhs.uk.

We thank you for your time spent taking this survey.

Your response has been recorded.

Appendix H: Interview schedule

Thank you for meeting with me today. We are here for a research interview to explore the work you have undertaken with children and young people with acquired brain injury and the factors that have contributed to your confidence levels when undertaking this work, as indicated on your questionnaire responses. There are no right or wrong answers, and all views and experiences are welcome.
Just to let you know that I am wearing headphones / the door is shut to protect confidentiality.
It is anticipated that the interview will last between 30 minutes to an hour in duration – Would you be happy to continue if it goes beyond that?

I know you received a copy of the information sheet, but before we get started, I would like to run through some of the key information about this research with you.

- Ethical approval to carry out this research has been obtained.
- The interview will be video recorded and transcribed.
- Participation in this research is entirely voluntary, and you can pause or discontinue your involvement at any time, with no adverse effects.
- There will be an opportunity for us to debrief following the interview and to discuss any thoughts or feelings that arise. This will be outside of the data gathering process.
- Confidentiality in the interview is subject to legal limitations or if a disclosure is made that suggests that imminent harm to self-and/or others may occur.
- The findings will be presented within my thesis and will be publicly available to read. I may publish the research at a later date, and the findings may also be fed back in service development days, within conference presentations and may be used to inform professional development activities.

Do you have any questions before we begin?

Are you happy to continue?

I'm going to start the recording now.

Please could you describe the work that you have undertaken in relation to children with ABI in your current and any previous employment?

In your questionnaire responses you indicated high levels of confidence when working with CYP with ABI, perhaps you could describe this in more detail for me? Including commenting on any particular factors you feel have contributed to how confident you feel? (e.g. training, experience etc)

Is there anything you can think of that you could access that would support to increase your confidence further when working with children with ABI?

Is there anything you can suggest other EPs can do/access to increase their confidence when working with children with ABI?

Is there anything else you would like to comment on or share?

I’m going to stop the recording now - Thank you for taking the time to talk with me today.
Is there anything from the interview you would like to ask or discuss further?
Just to let you know:

- I am interviewing a small number of EPs and will be looking at themes in my data.
- If you do decide to change your mind, you can withdraw at any time up until the data has been analysed, at which point your participation will have already influenced the findings of the study.
- All records related to your participation in this research study will be handled and stored securely. Your identity on these records will be indicated by a pseudonym rather than by your name.
- The small sample size may also mean that you recognise some examples and experiences you have shared in interviews, for example in quotes used within the write up. However, to protect your identity, any identifiable details will be changed.

Appendix I: Example interview transcript

00:00:05 **Researcher**

OK, please could you describe the work that you have undertaken in relation to children with acquired brain injury in your current and any previous employment?

00:00:15 **Interviewee**

Sure. So I would say erm, experiences are limited, but when they come along, I think we really try to sit up and pay attention. Erm, I was very fortunate that our local hospital services put on an event.

00:00:35 **Interviewee**

For allied professionals.

00:00:38 **Interviewee**

Around supporting children, particularly children with cancer. But it was very much relevant to children who have experienced.

00:00:50 **Interviewee**

Illness or, you know, adverse experiences that would prevent them from engaging in school it, it was quite broad, but I did feel it had relevance to children with a ABI's, so they put that on. We went along and we learned a lot about the supports that health services.

00:01:09 **Interviewee**

Offer and and we we we were able to reflect on ways in which our service.

00:01:14 **Interviewee**

Could um support children in in a domain that I think is probably outside the initial training for a lot of EP's, but it is something that comes up in case work, so quite soon after that, through the statutory assessment process I was asked to write psychological advice for a young man who had an ABI.

00:01:36 **Interviewee**

Which was life limiting.

00:01:37 **Interviewee**

so it was incredibly sensitive. What that information that the NHS Trust shared meant was that I had a good foundation of ideas to draw on, especially around provision but generally around approaching the case. But it also meant we had some really helpful relationships and connections with staff within that team.

00:01:59 **Interviewee**

We could liaise with so when we were looking at name of say

00:02:01 **Interviewee**

you know, paediatricians specialist nurse, we knew who they were and that enabled, I think, a much more open conversations and open dialogues when we were thinking about how best to support that young person. So in my career so far those opportunities have been scant. But I go back to the.

00:02:21 **Interviewee**

The the resource pack and the information that was shared as being a really helpful foundation in knowing which way to turn.

00:02:29 **Researcher**

OK. That's really interesting. Thank you. Are there any other pieces of work that you've done particularly aside from that statutory assessment that you might like to kind of tell me about or expand on?

00:02:39 **Interviewee**

I think for me in casework, like I said, these have been, this was a young person who was sort of key stage 2. Some of the the more common encounters I think with children with ABI's come in the early years work and perhaps yeah, depending on what their.

00:02:59 **Interviewee**

Birth experiences were like, or there's a there's a, you know, again, it's always very sensitive, very traumatic. But there are children who have been in accidents and all kinds of things that are leading to radical change. Erm and there was also an older a young man who was at a a selective school. So he was.

00:03:18 **Interviewee**

You know highly, academically able, huge career aspirations for his future and he was injured in a in a rugby match that was a life changing event for him. And again it's drawing on I think going back to the foundation of the confidence that that session with the the NHS Trust gave us.

00:03:36 **Interviewee**

In how we might support children with erm, with medical conditions that might not have otherwise been anticipated in their lives. So yeah, but it it's it doesn't come along often.

00:03:53 **Interviewee**

But there there are those points. I mean, the early years work was.

00:04:00 **Interviewee**

Through our work in the Child Development Centre, so it wasn't, it was non statutory.

00:04:06 **Interviewee**

And the piece of work with the young man in the selective school was commissioned by the school on the guidance of his health team, his medical team, although I think they might have been anticipating I'd go running in with some kind of standardised assessment, but I'm afraid I was not interested in doing that in any possible way.

00:04:26 **Researcher**

That's interesting because I think that what I have found from my research so far is that there's little information available about how we support children with acquired brain injury from an educational perspective and that it's, it remains quite within the health domain. So yeah, that's interesting that the school kind of sought your.

00:04:45 **Researcher**

Advice and perhaps not that of.

00:04:46 **Researcher**

For example, a clinical psychologist.

00:04:49 **Interviewee**

I think there was a clinical psychologist in the young man's team. They were thinking about the long term impact on his school experience, but I do think they probably thought that I would do some sort of standardised assessment.

00:05:00 **Interviewee**

But actually we we sat in the domain of kind of monitoring and supporting the school to to think about even things like.

00:05:09 **Interviewee**

How he creates a narrative to be able to talk to his friends about what's happened, cause they're bound to ask questions, how they keep a space for him in school, how they make sure his names on the register, what? How does he know where he's going? There are lots of things that can provoke a bit of anxiety for schools. I think when they're wanting to get it right. But actually it's just about normalising.

00:05:29 **Interviewee**

And welcoming somebody back, just as you would erm, and

00:05:31 **Interviewee**

I would add to that context. Erm, er…

00:05:37 **Interviewee**

Sort of personal family experience as well.

00:05:42 **Interviewee**

Oh, sorry, Apologies, Shelley, my my headset gets the hiccups sometimes.

00:05:46 **Researcher**

That's OK. Now I can hear you.

00:05:49 **Interviewee**

The so the experience from from a from a parenting point of view, really, you know, enlightens you as to how you're treated by the not just the medical team but schools and you know with with huge compassion, but sometimes a little misguided people trying to speak for you.

00:06:09 **Interviewee**

UM.

00:06:10 **Interviewee**

Or make decisions kind of in the best interests of the child, but on your behalf as a parent, and how? How disempowering that felt. So that's another sort of drive, I think, for me on a personal level rather than a service level to make sure that we work through a consultation modality. That means that multiple views can be heard and and all voices are equitable rather than being dominated by a sort of more expert or medical.

00:06:34 **Interviewee**

Model because there's a there's such a human element to what families, what children and young people are are experiencing.

00:06:42 **Interviewee**

So getting back to the foundations I think of like, you know, what do you enjoy? What your hobbies. What do you want to engage with in the future and it not all being focused on the difficulties that you're going to face

00:06:56 **Interviewee**

but thinking about the character, you know the qualities of resilience and positive psychology.

00:07:03 **Interviewee**

To bring into this area of our work.

00:07:06 **Researcher**

Yeah, and and just to clarify, I guess for the recording and the transcript, is that that you feel that as a parent you can put, you could put yourself in the shoes of those parents and think about what you might.

00:07:18 **Researcher**

How you might want to be approached.

00:07:21 **Interviewee**

Yes, yes, definitely. I mean, in a in a.

00:07:25 **Interviewee**

In a timeline, you know that session that our service had with our local NHS Trust was quite early in my post qualification career, but I really took it on.

00:07:40 **Interviewee**

They had paediatricians talking, they had parents talking from lived experience and they made a video about a young woman who had been treated for cancer and then returned to school, which, I mean, they just stuck with me so much and they gave us sort of physical resources to take away.

00:08:00 **Interviewee**

So that was that first point. And then quite soon after that was a piece of casework through statutory assessment, which I went back and drew on that that created the network of relationships. And I think it built confidence in how we might enter into very, very sensitive spaces, especially when.

00:08:18 **Interviewee**

The ABI, erm the consequence of that is life limiting.

00:08:24 **Interviewee**

And then I think there have been, you know, other piece of casework quite a bit more frequently around early years. And then this this young person, which was much more recent. But within that is personal, personal, lived experience for me in supporting a close family member with an ABI.

00:08:44 **Interviewee**

Through the same the same medical service that did that session so long ago.

00:08:51 **Interviewee**

So there's a there's a network of relationships I think, and of experiences that probably is not typically available, but it does make you kind of wonder how we might create those relationships. The the links between education and health in particular and us as EPS being a.

00:09:09 **Interviewee**

A profession that that has the potential to intersect quite successfully with those and and sort of taking an even sort of wider meta perspective. I think in in the service that I work in, we do have very good close working relationships with health that perhaps aren't naturally available in other ways.

00:09:28 **Interviewee**

And even our relationships with, say, the clinical psychologists who are supporting children and families with, who have children with ABI's are are very much aligned to a similar way of working it's about.

00:09:40 **Interviewee**

Um, you know creating space and offering space to to talk through and process some of the the challenges that families are experiencing.

00:09:51 **Interviewee**

Um and to bring different parts of the system together around the child, so there's a real sense of a team and a collaboration rather than lots and lots of different people all doing their own thing. But that sense of collaboration and noticing how that's being invited in in certain circumstances, such as the young man.

00:10:11 **Interviewee**

With the with the the sporting injury.

00:10:15 **Interviewee**

But I don't think that that team necessarily thought Ohh EP, because we'll think about his well-being in school. They thought EP, because they'll be able to do a couple of WISCs and and see what his cognitive skills are like. Yeah, which there may be assumptions on their part about what our profession can offer. So I wonder how we can.

00:10:35 **Interviewee**

Help raise our profile in that sense as well.

00:10:38 **Interviewee**

OK, you're making me think about lots of things, Shelly.

00:10:42 **Researcher**

Just you mentioned about our personal experience there and I'm not gonna ask you to expand on that, but I wondered whether you would feel comfortable to confirm whether that person was a child or an adult just because of obviously I know about the differences in recovery//

Interviewee

//Indeed//

Researcher

comparative to children and adults. And yeah, I'm not gonna ask you to say any more, but I wondered.

00:10:59 **Researcher**

Whether you'd be happy to confirm, but please, erm, deny to…//

Interviewee:

//Yeah…//

00:11:04 **Researcher**

To answer if that's uncomfortable.

00:11:04 **Interviewee**

Yeah. No, thank you.

00:11:07 **Interviewee**

I really appreciate the.

00:11:08 **Interviewee**

You putting some safe parameters around that? It was a child.

00:11:13 **Researcher**

OK. Thank you.

00:11:15 **Researcher**

I'm sorry that you had that experience.

00:11:17 **Interviewee**

Thank you.

00:11:19 **Researcher**

Erm, Just to move on to the next question, so in your questionnaire responses, you indicated high levels of confidence when working with children and young people with acquired brain injury, which is why I selected and asked for you to come to interview. And I wondered if you could perhaps describe in in a little bit more detail kind of where this confidence comes from, including perhaps.

00:11:38 **Researcher**

Commenting on any particular factors, you feel have contributed to this and I know you've touched on that particular training, I wonder if maybe you could.

00:11:47 **Researcher**

Elaborate, perhaps a bit more about the content of.

00:11:50 **Researcher**

That or any of our perhaps training or experience that you've had that you?

00:11:53 **Researcher**

Feel have led you to be as confident as you are.

00:11:58 **Interviewee**

It's, I think even the the idea of confidence or professional confidence is is quite an interesting one to explore because this isn't.

00:12:05 **Interviewee**

About sort of.

00:12:08 **Interviewee**

Knowledge of, er erm, well beyond what is typical for an EP of things like neurological processes or brain development or anything like that. It's more about my belief that.

00:12:23 **Interviewee**

A consultation approach to.

00:12:27 **Interviewee**

Most, if not any, piece of commissioned work can be when the circumstances are enabling.

00:12:37 **Interviewee**

A very helpful intervention in itself, and I guess it would come back to without going down a long waffly winding road.

00:12:46 **Interviewee**

When I trained the new code of practise was in place or or was just coming into being, erm leading for that change for EP's. Working with 0 to 19 broadly up to 25, and I noticed among a lot of skilled and experienced EP's a sense of feeling de skilled.

00:13:07 **Interviewee**

And wondering what it is they needed to do to work with this post 16 age range. Although we'd always worked up to 19 actually more typically it was the end of key stage 4.

Researcher

Mm-hmm.

Interviewee

And sort of being able to recognise that the core skills that we have as an EP.

00:13:27 **Interviewee**

Are, are entirely transferable to a wide range of contexts.

00:13:32 **Interviewee**

And I think my confidence in this area comes from.

00:13:37 **Interviewee**

Comfort in not knowing everything, not being an expert, but actually being able to sit alongside a family and walk alongside their lived experiences so we don't, didn't feel like I needed much more than that to be able to be confident in that domain.

00:13:54 **Researcher**

Oh, great. That's really helpful. Thank you. Yeah, really interesting perspective and perhaps different to some of the other responses I've had so.

00:14:00 **Researcher**

I like that. Thanks.

00:14:02 **Researcher**

Is there anything that you feel that you could access that might support to increase your confidence even further? I mean that might be.

00:14:08 **Researcher**

A no, but.

00:14:10 **Interviewee**

Well, I've. I've always. I have always wondered because there are some really interesting professional development courses.

00:14:15 **Interviewee**

Out there for EP's who perhaps wanting to move into a more specialist kind of neuropsychological.

00:14:25 **Interviewee**

Career path I've always wondered about that. I've always been interested in that first thing I did as a as a parent of a child with an AB. I was by a the the brain colouring book and start trying to learn about anatomy.

00:14:39 **Researcher**

I have that book too.

00:14:41 **Interviewee**

I've got page one coloured in [laughter]. I've tried, I've tried. It's not where my skills lie, I'm afraid I'm and I'm curious about understanding more, but then I feel sometimes that can be.

00:14:55 **Interviewee**

You know, being able to name parts of the brain and talk about, you know what the frontal cortex is all about. And the amygdala and things like that only gets us so far. And it starts to, it starts to take us out of our lane, I think in terms of competence and also meaning. So knowledge of anatomy does not.

00:15:15 **Interviewee**

Give you any shortcut to understanding somebody's lived experience and each you know each family, each child being completely unique and being able to.

00:15:23 **Interviewee**

Sit and be curious with that.

00:15:25 **Interviewee**

And and and their uniqueness and and their ABI and their experiences of medical treatment and intervention and recovery being one part of a very complex life. And I feel more.

00:15:43 **Interviewee**

You know, happier to sit there and develop my skills in, say, compassionate consultation than going down a road of.

00:15:52 **Interviewee**

Biological psychology that.

00:15:55 **Interviewee**

Doesn't fit naturally, and I'm not. I'm not sure I see how purposeful that would.

00:15:59 **Interviewee**

Be so yeah, it's not the best [laughter] answer. I think the more knowledge we acquire sometimes that can give us a false sense of confidence. And I'm trying to be authentic to what EPS can do.

00:16:16 **Researcher**

I really like how that answer linked really nicely to the to your response to the previous question about not being an expert and how the consultation skills should be sufficient in these situations so…

Interviewee

Mmmm….

00:16:27 **Researcher**

I really liked how yeah, by learning loads about neuropsychology and the anatomy of the brain potentially enhances us into that expert position, which is, perhaps not helpful. So I think that answer was perfect. I think it really linked really nicely to the answer that you gave to the previous question so.

00:16:44 **Interviewee**

Ohh well, I'm glad.

00:16:44 **Researcher**

There's no there's no best answers. Remember it’s all experiences.

00:16:50 **Interviewee**

Thank you [giggle]

00:16:52 **Researcher**

Is there anything that you could suggest that other EP's might be able to do or access to increase their confidence when working with children with acquired brain injury? So perhaps here I'm thinking about my paper might be able to provide some some.

00:17:06 **Researcher**

Ideas to EPs that are less confident.

00:17:09 **Researcher**

About what they could do to increase their confidence.

00:17:14 **Interviewee**

Yeah, I think what springs to mind and what I really made a huge amount of use of.

00:17:20 **Interviewee**

In that in, in in those casework, but particularly I think the young man.

00:17:26 **Interviewee**

Through the statutory piece of work where we knew already.

00:17:29 **Interviewee**

The life limiting nature of the condition that he was navigating.

Interviewee

Is supervision

00:17:38 **Interviewee**

Having that space to slow down and and and think things through because I think it's noticing my own reaction to being given that particular case was anxiety was whoa, where am I gonna start? What am I gonna do here? to just slow that down and think again. Like you can you absolutely can do this.

00:17:57 **Interviewee**

You know there's there's sensitivity around the case, of course, but I I I tread gently wherever I go with any family that I meet.

00:18:07 **Interviewee**

And yeah, thinking about.

00:18:11 **Interviewee**

You know, perhaps an elevated level of supervision given the the emotive nature of the work, it it, you know it's not erm,

00:18:20 **Interviewee**

Like we've said, it's not a test of your knowledge of brain and anatomy and the potential impact of that. It's about getting in touch with your core.

00:18:31 **Interviewee**

Skills and being comfortable with not knowing and being possibly in this case the far from the expert, but relying on the expertise and lived experience of the the family and the child that you're supporting. And to be able to kind of go with that as best you can.

00:18:51 **Interviewee**

Because you can't come into a case with a with a child with an ABI feeling like you know what you're doing, I'd be worried. So. Yeah. Supervision. Lots of opportunity for reflection, I would say.

00:19:06 **Interviewee**

Making reflective field notes afterwards as well, just to help you with the processing and making sense of the experience and try and tune into your the skills that you have in bucket loads which are going to be incredibly valuable to the family that you're supporting.

00:19:28 **Researcher**

Lovely. Thank you. That is the final of my kind of formal questions. I guess I just wondered if there's anything else that you'd like to comment on or share before I stop the recording.

00:19:42 **Interviewee**

I think I'm noticing as we're talking like a a really strong pull to go and get those materials out of my cupboard and have a have another look through really and to get my brain colouring book out. So it's interesting what feelings of conscious incompetence this this area of work can raise.

00:20:02 **Interviewee**

And I don't think that's unusual in the EP world.

00:20:04 **Interviewee**

To feel that way, but there's somehow.

00:20:09 **Interviewee**

A sense that there should be more that you could do, more that you could read a journal article that will give you the answers and and I'm I'm interested in noticing that sort of coming up for me and thinking no, you know the everything, everything turned out the best it could possibly be in on all of that casework.

00:20:30 **Interviewee**

And the work that we brought as an EP service did make a positive difference. So you know, trust,

00:20:39 **Interviewee**

Trust what you have?

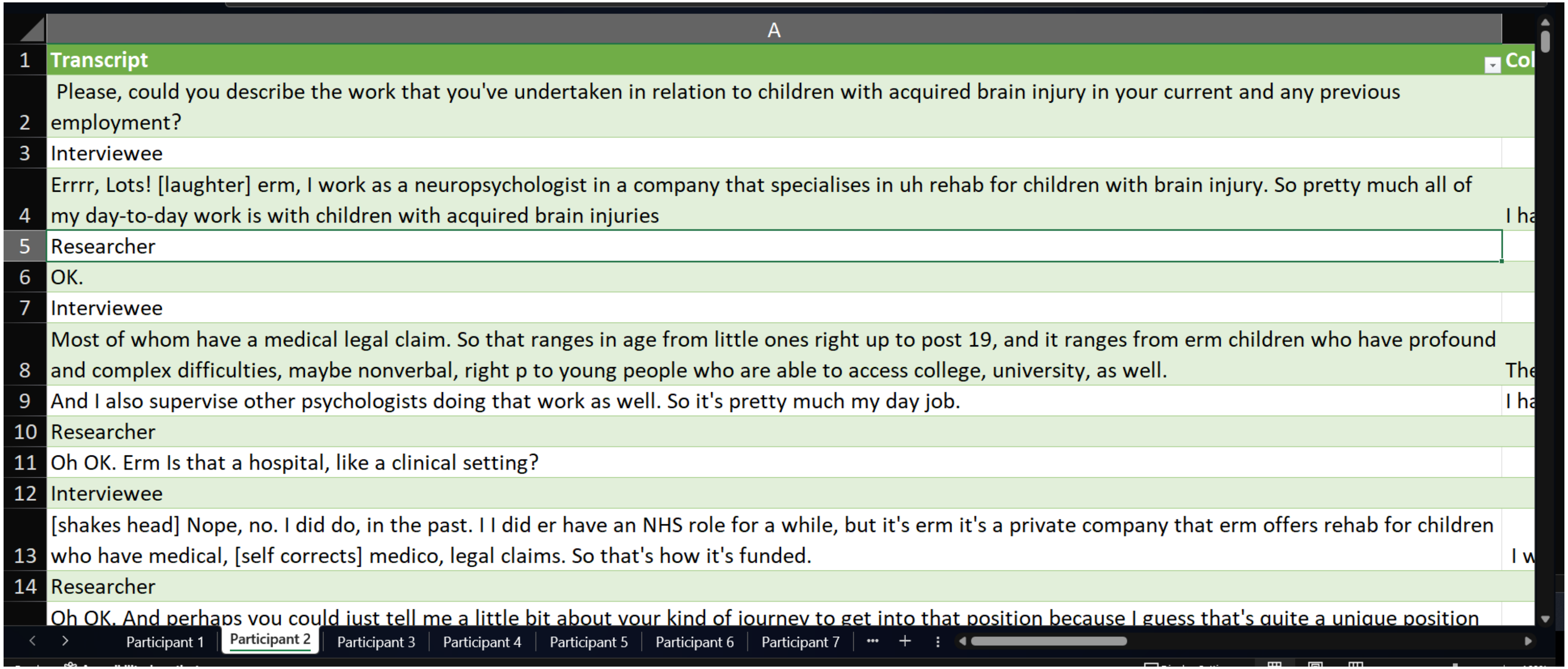
00:20:41 **Interviewee**

But also stay curious and colour in the brain and read the articles, but don't lean on them thinking that they have answers that you don't.

00:20:52 **Researcher**

Lovely. That's really helpful. What a nice note to finish on. I'm gonna stop the recording now.

Appendix J: Excel spreadsheet for coding (extract)



	A	
1	**Transcript**	Col
2	Please, could you describe the work that you've undertaken in relation to children with acquired brain injury in your current and any previous employment?	
3	Interviewee	
4	Errrr, Lots! [laughter] erm, I work as a neuropsychologist in a company that specialises in uh rehab for children with brain injury. So pretty much all of my day-to-day work is with children with acquired brain injuries	I ha
5	Researcher	
6	OK.	
7	Interviewee	
8	Most of whom have a medical legal claim. So that ranges in age from little ones right up to post 19, and it ranges from erm children who have profound and complex difficulties, maybe nonverbal, right p to young people who are able to access college, university, as well.	The
9	And I also supervise other psychologists doing that work as well. So it's pretty much my day job.	I ha
10	Researcher	
11	Oh OK. Erm Is that a hospital, like a clinical setting?	
12	Interviewee	
13	[shakes head] Nope, no. I did do, in the past. I I did er have an NHS role for a while, but it's erm it's a private company that erm offers rehab for children who have medical, [self corrects] medico, legal claims. So that's how it's funded.	I w
14	Researcher	
	Oh OK. And perhaps you could just tell me a little bit about your kind of journey to get into that position because I guess that's quite a unique position	

Appendix K: The theme generation process

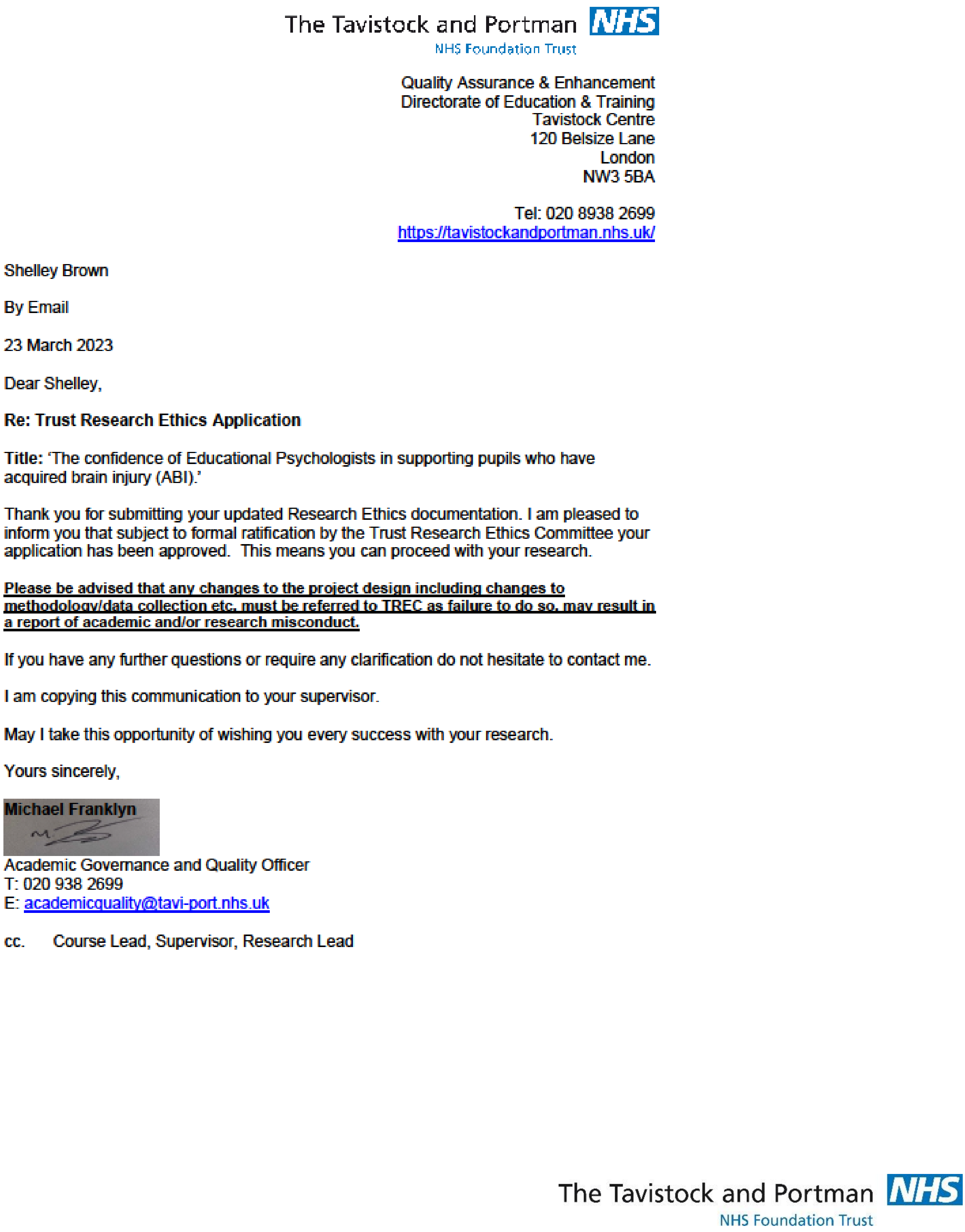
Theme	**Subtheme**	**Codes**
The wider context	This is an evolving area	• There has been an increased interest at a national/political level • There is an increased interest generally • Things have improved • Technological advances have aided rising interest levels • The political landscape plays a part • ABI gets less attention that other conditions • Other professions are taking a greater interest • This is a constantly evolving area • Understanding of ABI is in its infancy • Interest in this area is increasing • We need more research in this area • It is the role of the EP to be on a continued learning journey • There is a need to refresh previous learning • The definition of ABI is not clear • There is work needed at multiple levels • Further progress is needed
	The role of EP training	• There is variation in what the training providers offer • I didn’t have much teaching at uni on this • The role of the initial EP training • Where does ABI sit in the teaching of TEPs

		• We learn so much but why no this
Barriers	uncertainty	• I didn't understand the impact • It is unknown to me • I need to learn • I feel consciously incompetent • I feel unsure about how I can help • What am I going to do? • I worry about misinformation • I have limited experience • We should be doing more in this area • This work was new to me • What is my role here? • I feel out of my depth here? • What is the role of the EP? • Little is known about ABI in childhood • The EP role in this domain is not well understood There aren't many EPs that have a lot of knowledge in this area
	Access to further learning	• Theory to practise gaps • I have had some CPD but theory to practise gaps remain • Higher qualifications are difficult for 'jobbing' EPs to obtain • The CPD I have had hasn't been helpful • No training was provided in the local authority context • It's not always easy to find good CPD in this area • There isn't always the time to engage in the CPD I might want to

		• It can be hard to find appropriately pitched CPD • Additional qualifications can be very costly (financially) • There are barrier to accessing some CPD • There is a lack of accessible CPD • Information relevant to EPs can still be hard to find The learning can be abstract • Good quality CPD takes time • A little bit of info can give people an inflated sense of confidence • A little bit of knowledge isn't always a good thing • There is misinformation out there
	The hidden element of ABI	• ABI is more common than people think • The nature and cause of the difficulties was hidden • The school need to be aware of the injury in order to highlight the child for work • His needs increased over time • They had needs in different areas • CYP with ABI are hidden • Lots of children with ABI wont identify as such • There is a hidden element to ABI • There are things the child now cant do, due to their injury that that could previously • The ABI can be unexpected

		• They aren’t the child they were • The child was presenting differently post injury • The child had a different behavioural presentation post injury • Where does brain injury stop and other conditions start

Appendix L: Tavistock and Portman Trust Research Ethics Committee (TREC) approval



The Tavistock and Portman NHS
NHS Foundation Trust

Quality Assurance & Enhancement
Directorate of Education & Training
Tavistock Centre
120 Belsize Lane
London
NW3 5BA

Tel: 020 8938 2699
https://tavistockandportman.nhs.uk/

Shelley Brown

By Email

23 March 2023

Dear Shelley,

Re: Trust Research Ethics Application

Title: 'The confidence of Educational Psychologists in supporting pupils who have acquired brain injury (ABI).'

Thank you for submitting your updated Research Ethics documentation. I am pleased to inform you that subject to formal ratification by the Trust Research Ethics Committee your application has been approved. This means you can proceed with your research.

Please be advised that any changes to the project design including changes to methodology/data collection etc. must be referred to TREC as failure to do so, may result in a report of academic and/or research misconduct.

If you have any further questions or require any clarification do not hesitate to contact me.

I am copying this communication to your supervisor.

May I take this opportunity of wishing you every success with your research.

Yours sincerely,

Michael Franklyn

Academic Governance and Quality Officer
T: 020 938 2699
E: academicquality@tavi-port.nhs.uk

cc. Course Lead, Supervisor, Research Lead

The Tavistock and Portman NHS
NHS Foundation Trust

Tavistock and Portman Trust Research Ethics Committee (TREC)

APPLICATION FOR ETHICAL REVIEW OF STUDENT RESEARCH PROJECTS

This application should be submitted alongside copies of any supporting documentation which will be handed to participants, including a participant information sheet, consent form, self-completion survey or questionnaire.

Where a form is submitted and sections are incomplete, the form will not be considered by TREC and will be returned to the applicant for completion.

For further guidance please contact Paru Jeram (academicquality@tavi-port.nhs.uk)

FOR ALL APPLICANTS

If you already have ethical approval from another body (including HRA/IRAS) please submit the application form and outcome letters. You need only complete sections of the TREC form which are NOT covered in your existing approval

Is your project considered as 'research' according to the HRA tool? (http://www.hra-decisiontools.org.uk/research/index.html)	Yes
Will your project involve participants who are under 18 or who are classed as vulnerable? (see section 7)	No
Will your project include data collection outside of the UK?	No

SECTION A: PROJECT DETAILS

Project title	The confidence of Educational Psychologists in supporting pupils who have acquired brain injury (ABI).		
Proposed project start date	February 2023	**Anticipated project end date**	July 2024
Principle Investigator (normally your Research Supervisor): Dr Rachael Green			
Please note: TREC approval will only be given for the length of the project as stated above up to a maximum of 6 years. Projects exceeding these timeframes will need additional ethical approval			

Has NHS or other approval been sought for this research including through submission via Research Application System (IRAS) or to the Health Research Authority (HRA)?	**YES (NRES approval)** ☐ **YES (HRA approval)** ☐ **Other** ☐ **NO** **X**
If you already have ethical approval from another body (including HRA/IRAS) please submit the application form and outcome letters.	

SECTION B: APPLICANT DETAILS

Name of Researcher	Shelley Brown
Programme of Study and Target Award	Child, Community and Educational Psychology (M4)
Email address	sbrown@tavi-port.nhs.uk
Contact telephone number	07749502604

SECTION C: CONFLICTS OF INTEREST

Will any of the researchers or their institutions receive any other benefits or incentives for taking part in this research over and above their normal salary package or the costs of undertaking the research? **YES** ☐ **NO X** If **YES**, please detail below:
Is there any further possibility for conflict of interest? YES ☐ **NO X**

Are you proposing to conduct this work in a location where you work or have a placement? **YES** ☐ **NO X** If **YES**, please detail below outline how you will avoid issues arising around colleagues being involved in this project:

Is your project being commissioned by and/or carried out on behalf of a body external to the Trust? (for example; commissioned by a local authority, school, care home, other NHS Trust or other organisation). *Please note that 'external' is defined as an organisation which is external to the Tavistock and Portman NHS Foundation Trust (Trust)	**YES** ☐ **NO X**
If **YES**, please add details here:	
Will you be required to get further ethical approval after receiving TREC approval? If **YES**, please supply details of the ethical approval bodies below AND include any letters of approval from the ethical approval bodies (letters received after receiving TREC approval should be submitted to complete your record):	**YES** ☐ **NO X**
If your project is being undertaken with one or more clinical services or organisations external to the Trust, please provide details of these:	
N/A	
If you still need to agree these arrangements or if you can only approach organisations after you have ethical approval, please identify the types of organisations (eg. schools or clinical services) you wish to approach:	
N/A	

Do you have approval from the organisations detailed above? (this includes R&D approval where relevant) Please attach approval letters to this application. Any approval letters received after TREC approval has been granted MUST be submitted to be appended to your record	**YES ☐ NO ☐ NA X**

SECTION D: SIGNATURES AND DECLARATIONS

APPLICANT DECLARATION

I confirm that:

- The information contained in this application is, to the best of my knowledge, correct and up to date.
- I have attempted to identify all risks related to the research.
- I acknowledge my obligations and commitment to upholding ethical principles and to keep my supervisor updated with the progress of my research
- I am aware that for cases of proven misconduct, it may result in formal disciplinary proceedings and/or the cancellation of the proposed research.
- I understand that if my project design, methodology or method of data collection changes I must seek an amendment to my ethical approvals as failure to do so, may result in a report of academic and/or research misconduct.

Applicant (print name)	Shelley Brown
Signed	
Date	

FOR RESEARCH DEGREE STUDENT APPLICANTS ONLY

Name of Supervisor/Principal Investigator	Dr Rachael Green

Supervisor –

- Does the student have the necessary skills to carry out the research?
  YES ☒ ☐
- Is the participant information sheet, consent form and any other documentation appropriate?
  YES ☒ ☐
- Are the procedures for recruitment of participants and obtaining informed consent suitable and sufficient?
  YES ☒ ☐
- Where required, does the researcher have current Disclosure and Barring Service (DBS) clearance?
  YES ☒ ☐

Signed	Rachael Green
Date	17.02.23

COURSE LEAD/RESEARCH LEAD

Does the proposed research as detailed herein have your support to proceed? YES ☒ NO ☐

Signed	A Styles
Date	21.02.2023

SECTION E: DETAILS OF THE PROPOSED RESEARCH

1. Provide a brief description of the proposed research, including the requirements of participants. This must be in lay terms and free from technical or discipline specific terminology or jargon. If such terms are required, please ensure they are adequately explained (Do not exceed 500 words)

This research will explore the work that Educational Psychologists are doing with children with ABI nationally and how confident they feel when undertaking this work. It will also describe the factors that contribute to levels of EP confidence.

A mixed method approach will be used. The first phase will invite participants (EPs) to complete an online questionnaire which will be distributed nationally. This phase will explore the landscape regarding the work that EPs are doing with CYP with ABI and how confident they feel with this. There is no restriction on the number of participants for this phase.

The second phase will describe the factors that contribute to EPs level of confidence. This information will be ascertained via semi structured interviews.

Participants will be asked at the end of the quantitative phase to indicate if they would be prepared to take part in a follow up interview. Between 6 and 10 participants will be selected. The interviews will explore factors that contributed to the confidence scores provided in the questionnaire responses.

Interviews will be conducted using video conferencing software, such as MS Teams. This will provide greater flexibility for participant engagement and limits the time required from them. Interviews will last no more than one hour. Interviews will be recorded in order that data is available for analysis. Participants will be made aware of this in advance. Qualitative data will be analysed using reflexive thematic analysis (Braun and Clarke, 2022).

2. Provide a statement on the aims and significance of the proposed research, including potential impact to knowledge and understanding in the field (where appropriate, indicate the associated hypothesis which will be tested). This should be a clear justification of the proposed research, why it should proceed and a statement on any anticipated benefits to the community. (Do not exceed 700 words)

The aim of this research is to explore the work that EPs are doing with children with ABI nationally and how confident they feel when undertaking this work. It will also describe the factors that contribute to levels of EP confidence.

Some statistics suggest as many as 700,000 children per year present at emergency departments with a recent head injury, in England and Wales (NICE, 2019). In addition, there will likely be thousands more injuries that did not require medical treatment and therefore are not accounted for in any statistics. This is particularly pertinent in paediatric injury, as children require a two to three-fold greater impact to produce clinical symptoms compared with adults (McCrory et al, 2004). This likely means that many injuries are missed, or under categorised, regarding severity. This risk is increased by the simplicity of measurement tools such as the Glasgow Coma Scale which some claim are unspecific, unreliable and poorly understood (Tenovuo et al, 2021).

The number of children sustaining and surviving acquired brain injury (ABI) is increasing (Bate et al, 2021). According to the World Health Organisation (2022) TBI is the leading cause of death and disability in children and young adults worldwide. The impact of such injury is long standing and wide reaching and the effects for children may not become apparent for several years. Children may present with difficulties spanning the four areas of special educational needs (SEN) identified by the SEN and disabilities Code of Practice, (Department for Education [DfE], 2015). Most will be in mainstream schooling (Bate et al, 2021).

Despite the high prevalence of brain injury, the confidence of teachers to support children with these needs is low (The Children's Trust, 2022a). Educational Psychologist's (EPs) are felt to be well placed to support schools and teachers in meeting the needs of these children (Ball & Howe, 2014). However, many EPs feel as though they lack the training and knowledge required to support schools in this area (Bozic & Morris, 2005) and the literature published in EP journals is lacking.

No research has been identified that has explored the work EPs are doing to support children with ABI, or how prevalent this is for EP practice. Whilst the limited literature that does exist points to EPs being under confident in this area, this information has not been quantified. This research is designed to fill that gap. Furthermore, describing the factors that contribute to increased or decreased confidence will provide information that can used by both local authorities and training providers regarding steps that could be taken to support EPs with this. The ultimate aim being that children with ABI are better understood and supported by the adults working with them.

3. **Provide an outline of the methodology for the proposed research, including proposed method of data collection, *tasks* assigned to participants of the research and the proposed method and duration of data analysis. If the proposed research makes use of pre-established and generally accepted techniques, please make this clear. (Do not exceed 500 words)**

The proposed research has a mixed method design and is underpinned by a critical realist ontology and epistemology.

A sequential mixed methods design will be used (Creswell, 2009). This enables both quantitative and qualitative data to be gathered with the integration of both approaches providing a more enriched understanding of the problem. The two phases of the research will be distinct from one another with the qualitative following on from the quantitative. This will enable participants representing a range of experience and confidence levels to be selected to take part in the qualitative part. This will ensure that the voices of those from across the spectrum of experience and confidence are heard and will provide richer triangulation of the data.

Part 1:

Quantitative data The quantitative part of the research will be fulfilled through the distribution of a questionnaire.

Demographic information such as previous training, pre and post qualification experience and years of experience will be obtained, in order to contextualise the findings. The work that participants have completed with children with ABI will then be explored through questions such as, ‘have you been consulted about a child with and ABI?’, ‘what work have you undertaken with a child with an ABI?’, ‘how many cases have you worked on where the child had an ABI?’ and ‘how confident did you feel when working with this child?’. Given that this data will be presented using descriptive statistics, questions asked will be closed and confidence will be assessed using ratings scales. The questionnaire will be designed in an online platform for self-administration (Qualtrics) and distributed via web link.

This data will be analysed using descriptive statistics in order to outline the landscape within which EPs are currently working and how confident they are.

Part 2:

Qualitative data The qualitative element of the research will involve semi-structured interviews with between 6 and 10 participants, who completed the questionnaire. This sample size is based on recommendations by Braun and Clarke (2013). The use of semi structured interviews with a smaller number of participants will enable further exploration factors that contributed to the confidence scores provided in the questionnaire responses. More nuanced, contextualised and rich information will be obtained and participants will have the opportunity to provide further information not captured by the questionnaire. It is envisaged that interviews will last no more than one hour each and will be conducted and recorded using video conferencing software such as MS Teams. This will provide greater flexibility for participant engagement and limits the time required from them.

This data will be analysed using reflexive thematic analysis (RTA) as described by Braun and Clarke (2022).

SECTION F: PARTICIPANT DETAILS

4. Provide an explanation detailing how you will identify, approach and recruit the participants for the proposed research, including clarification on sample size and location. Please provide justification for the exclusion/inclusion criteria for this study (i.e. who will be allowed to / not allowed to participate) and explain briefly, in lay terms, why these criteria are in place. (Do not exceed 500 words)

Part 1: Quantitative element

Inclusion criteria: Qualified EPs working within Great Britain within any context (including, LA, NHS and private practice).

Exclusion criteria: EPs practising outside of the Great Britain
Trainee Educational Psychologists

Recruitment strategy: There will be no limit to the number of participants for this part of the research as the aim is to capture the widest range of views possible. As such, a range of strategies will be employed. These will include:

- advertising on social media platforms frequented by EPs (E.g. Twitter)
- Contacting EP services via the National Association of Educational Psychologists (NAPEP)
- Advertising on the EP platforms such as EPNET and EdPsy
- Snowball sampling

The participant information sheet will make it clear who is in/eligible.

Part 2: Qualitative element

At the end of the quantitative element, participants will be asked if they would be prepared to take part in a follow up interview. Six to ten* participants from those who agreed, will be chosen. These participants will be purposefully selected in order that there is a broad representation of responses from element one. E.g., to ensure that not all participants in the qualitative element expressed similar levels of confidence to each other in the quantitative element.

*Braun and Clarke (2013) recommend the use of six-ten participants for a small thematic analysis project. Whilst they increase this number to 10-20 for UK Professional Doctorate research, the smaller number will be adhered to, on the basis of this being a mixed method study.

5. Please state the location(s) of the proposed research including the location of any interviews. Please provide a Risk Assessment if required. Consideration should be given to lone working, visiting private residences, conducting research outside working hours or any other non-standard arrangements.

If any data collection is to be done online, please identify the platforms to be used.

Quantitative element:

Participants will self-administer an online questionnaire developed using Qualtrics. Access to Qualtrics is via The University of Essex.

Qualitative element:

Interviews will be conducted and video recorded using MS teams.

6. Will the participants be from any of the following groups?*(Tick as appropriate)*

☐ Students or Staff of the Trust or Partner delivering your programme.

X Adults (over the age of 18 years with mental capacity to give consent to participate in the research).

☐ Children or legal minors (anyone under the age of 16 years)[1]

☐ Adults who are unconscious, severely ill or have a terminal illness.

☐ Adults who may lose mental capacity to consent during the course of the research.

☐ Adults in emergency situations.

☐ Adults[2] with mental illness - particularly those detained under the Mental Health Act (1983 & 2007).

☐ Participants who may lack capacity to consent to participate in the research under the research requirements of the Mental Capacity Act (2005).

☐ Prisoners, where ethical approval may be required from the National Offender Management Service (NOMS).

☐ Young Offenders, where ethical approval may be required from the National Offender Management Service (NOMS).

☐ Healthy volunteers (in high risk intervention studies).

☐ Participants who may be considered to have a pre-existing and potentially dependent[3] relationship with the investigator (e.g. those in care homes, students, colleagues, service-users, patients).

☐ Other vulnerable groups (see Question 6).

☐ Adults who are in custody, custodial care, or for whom a court has assumed responsibility.

☐ Participants who are members of the Armed Forces.

[1] *If the proposed research involves children or adults who meet the Police Act (1997) definition of vulnerability[3], any researchers who will have contact with participants must have current Disclosure and Barring Service (DBS) clearance.*

[2] *'Adults with a learning or physical disability, a physical or mental illness, or a reduction in physical or mental capacity, and living in a care home or home for people with learning difficulties or receiving care in their own home, or receiving hospital or social care services.' (Police Act, 1997)*

[3] *Proposed research involving participants with whom the investigator or researcher(s) shares a dependent or unequal relationships (e.g. teacher/student, clinical therapist/service-user) may compromise the ability to give informed consent which is free from any form of pressure (real or implied) arising from this relationship. TREC recommends that, wherever practicable, investigators choose participants with whom they have no dependent relationship. Following due scrutiny, if the investigator is confident that the research involving participants in dependent relationships is vital and defensible, TREC will require additional information setting out the case and detailing how risks inherent in the dependent relationship will be managed. TREC will also need to be reassured that refusal to participate will not result in any discrimination or penalty.*

7. Will the study involve participants who are vulnerable? YES ☐ NO X

For the purposes of research, 'vulnerable' participants may be adults whose ability to protect their own interests are impaired or reduced in comparison to that of the broader population. Vulnerability may arise from:

- the participant's personal characteristics (e.g. mental or physical impairment)
- their social environment, context and/or disadvantage (e.g. socio-economic mobility, educational attainment, resources, substance dependence, displacement or homelessness).
- where prospective participants are at high risk of consenting under duress, or as a result of manipulation or coercion, they must also be considered as vulnerable
- children are automatically presumed to be vulnerable.

7.1. If YES, what special arrangements are in place to protect vulnerable participants' interests?

If YES, a Disclosure and Barring Service (DBS) check **within the last three years** is required.

Please provide details of the "clear disclosure":

Date of disclosure:
Type of disclosure:
Organisation that requested disclosure:
DBS certificate number:

(NOTE: information concerning activities which require DBS checks can be found via https://www.gov.uk/government/publications/dbs-check-eligible-positions-guidance). Please ***do not*** *include a copy of your DBS certificate with your application*

8. Do you propose to make any form of payment or incentive available to participants of the research? YES ☐ NO X

If **YES**, please provide details taking into account that any payment or incentive should be representative of reasonable remuneration for participation and may not be of a value that could be coercive or exerting undue influence on potential participants' decision to take part in the research. Wherever possible, remuneration in a monetary form should be avoided and substituted with vouchers, coupons or equivalent. Any payment made to research participants may have benefit or HMRC implications and participants should be alerted to this in the participant information sheet as they may wish to choose to decline payment.

9. What special arrangements are in place for eliciting informed consent from participants who may not adequately understand verbal explanations or written information provided in English; where participants have special communication needs; where participants have limited literacy; or where children are involved in the research? (Do not exceed 200 words)

SECTION F: RISK ASSESSMENT AND RISK MANAGEMENT

10. Does the proposed research involve any of the following? ***(Tick as appropriate)***

X use of a questionnaire, self-completion survey or data-collection instrument (attach copy)

☐ use of emails or the internet as a means of data collection

☐ use of written or computerised tests

X interviews (attach interview questions)

☐ diaries (attach diary record form)

☐ participant observation

☐ participant observation (in a non-public place) without their knowledge / covert research

X audio-recording interviewees or events

X video-recording interviewees or events

☐ access to personal and/or sensitive data (i.e. student, patient, client or service-user data) without the participant's informed consent for use of these data for research purposes

☐ administration of any questions, tasks, investigations, procedures or stimuli which may be experienced by participants as physically or mentally painful, stressful or unpleasant during or after the research process

☐ performance of any acts which might diminish the self-esteem of participants or cause them to experience discomfiture, regret or any other adverse emotional or psychological reaction

☐ Themes around extremism or radicalisation

☐ investigation of participants involved in illegal or illicit activities (e.g. use of illegal drugs)

☐ procedures that involve the deception of participants

☐ administration of any substance or agent

☐ use of non-treatment of placebo control conditions

☐ participation in a clinical trial

☐ research undertaken at an off-campus location (risk assessment attached)

☐ research overseas (please ensure Section G is complete)

11. Does the proposed research involve any specific or anticipated risks (e.g. physical, psychological, social, legal or economic) to participants that are greater than those encountered in everyday life?

☐ **NO**

If **YES**, please describe below including details of precautionary measures.

12. Where the procedures involve potential hazards and/or discomfort or distress for participants, please state what previous experience the investigator or researcher(s) have had in conducting this type of research.

13. Provide an explanation of any potential benefits to participants. Please ensure this is framed within the overall contribution of the proposed research to knowledge or practice. (Do not exceed 400 words)

NOTE: Where the proposed research involves students , they should be assured that accepting the offer to participate or choosing to decline will have no impact on their assessments or learning experience. Similarly, it should be made clear to participants who are patients, service-users and/or receiving any form of treatment or medication that they are not invited to participate in the belief that participation in the research will result in some relief or improvement in their condition.

Engaging in this research will provide EPs an opportunity to reflect on their practise and discuss the work they have undertaken with children with ABI.

The findings of this research will be shared with the EP community and contribute to the very limited research on ABI for the EP audience.

The summarising and synthesising of the literature on ABI through the contextualisation and literature review will provide up to date information with which EPs can use to become more brain injury aware. This will be pertinent due to the raising rates of ABI and subsequent likelihood that EPs will increasingly be asked to support children with these needs.

The description of factors that support EPs to feel confident when working with children with ABI, should be used by EP services and training providers to plan learning opportunities in order to support the development of the workforce. This will lead to increased knowledge and confidence.

14. Provide an outline of any measures you have in place in the event of adverse or unexpected outcomes and the potential impact this may have on participants involved in the proposed research. (Do not exceed 300 words)

The risks associated with taking part in this research are believed to be low. However. There is a small possibility that recalling the details of their work with children with ABI could be distressing. Furthermore, EPs may have personal experience of ABI which might also mean that participation is triggering for them.

In the event of adverse or unexpected outcomes, it will be made clear to participants that they can pause or discontinue the participation at any time, with no adverse effects.

Participants will be checked in with and given the opportunity to de brief with the researcher outside of the data gathering process.

Participants will be signposted to mental health charities such as ‘mind’ and ‘the Samaritans’ that will be able to support them with any emotional distress.

15. Provide an outline of your debriefing, support and feedback protocol for participants involved in the proposed research. This should include, for example, where participants may feel the need to discuss thoughts or feelings brought about following their participation in the research. This may involve referral to an external support or counseling service, where participation in the research has caused specific issues for participants.

The risks associated with taking part in this research are believed to be low. However. There is a small possibility that recalling the details of their work with children with ABI could be distressing. Furthermore, EPs may have personal experience of ABI which might also mean that participation is triggering for them.

In the event of adverse or unexpected outcomes, it will be made clear to participants that they can pause or discontinue the participation at any time, with no adverse effects.

Participants will be checked in with and given the opportunity to de brief with the researcher outside of the data gathering process.

Participants will be signposted to mental health charities such as ‘mind’ and ‘the Samaritans’ that will be able to support them with any emotional distress.

16. Please provide the names and nature of any external support or counselling organisations that will be suggested to participants if participation in the research has potential to raise specific issues for participants.

Mind: As well as providing information and support mind has an ‘infoline’ which offers confidential help for the price of a local call.

Samaritans: Has a free phone line available 24 hours a day 365 days per year.

17. Where medical aftercare may be necessary, this should include details of the treatment available to participants. Debriefing may involve the disclosure of further information on the aims of the research, the participant’s performance and/or the results of the research. (Do not exceed 500 words)

N/A

FOR RESEARCH UNDERTAKEN OUTSIDE THE UK

18. Does the proposed research involve travel outside of the UK? ☐ **NO**

If YES, please confirm:

☐ I have consulted the Foreign and Commonwealth Office website for guidance/travel advice? http://www.fco.gov.uk/en/travel-and-living-abroad/

☐ I have completed ta RISK Assessment covering all aspects of the project including consideration of the location of the data collection and risks to participants.

All overseas project data collection will need approval from the Deputy Director of Education and Training or their nominee. Normally this will be done based on the information provided in this form. All projects approved through the TREC process will be indemnified by the Trust against claims made by third parties.

If you have any queries regarding research outside the UK, please contact academicquality@tavi-port.nhs.uk:

Students are required to arrange their own travel and medical insurance to cover project work outside of the UK. Please indicate what insurance cover you have or will have in place.
19. Please evidence how compliance with all local research ethics and research governance requirements have been assessed for the country(ies) in which the research is taking place. Please also clarify how the requirements will be met:

SECTION G: PARTICIPANT CONSENT AND WITHDRAWAL

20. Have you attached a copy of your participant information sheet (this should be in *plain English*)? Where the research involves non-English speaking participants, please include translated materials.

YES X **NO** ☐

If **NO**, please indicate what alternative arrangements are in place below:

21. Have you attached a copy of your participant consent form (this should be in *plain English*)? Where the research involves non-English speaking participants, please include translated materials.

YES X **NO** ☐

If **NO**, please indicate what alternative arrangements are in place below:

22. The following is a <u>participant information sheet</u> checklist covering the various points that should be included in this document.

X Clear identification of the Trust as the sponsor for the research, the project title, the Researcher and Principal Investigator (your Research Supervisor) and other researchers along with relevant contact details.

X Details of what involvement in the proposed research will require (e.g., participation in interviews, completion of questionnaire, audio/video-recording of events), estimated time commitment and any risks involved.

X A statement confirming that the research has received formal approval from TREC or other ethics body.

X If the sample size is small, advice to participants that this may have implications for confidentiality / anonymity.

☐ A clear statement that where participants are in a dependent relationship with any of the researchers that participation in the research will have no impact on assessment / treatment / service-use or support.

X Assurance that involvement in the project is voluntary and that participants are free to withdraw consent at any time, and to withdraw any unprocessed data previously supplied.

X Advice as to arrangements to be made to protect confidentiality of data, including that confidentiality of information provided is subject to legal limitations.

X A statement that the data generated in the course of the research will be retained in accordance with the Trusts 's Data Protection and handling Policies.: https://tavistockandportman.nhs.uk/about-us/governance/policies-and-procedures/

X Advice that if participants have any concerns about the conduct of the investigator, researcher(s) or any other aspect of this research project, they should contact Simon Carrington, Head of Academic Governance and Quality Assurance (academicquality@tavi-port.nhs.uk)

☐ Confirmation on any limitations in confidentiality where disclosure of imminent harm to self and/or others may occur.

23. The following is a consent form checklist covering the various points that should be included in this document.

X Trust letterhead or logo.

X Title of the project (with research degree projects this need not necessarily be the title of the thesis) and names of investigators.

X Confirmation that the research project is part of a degree

X Confirmation that involvement in the project is voluntary and that participants are free to withdraw at any time, or to withdraw any unprocessed data previously supplied.

X Confirmation of particular requirements of participants, including for example whether interviews are to be audio-/video-recorded, whether anonymised quotes will be used in publications advice of legal limitations to data confidentiality.

X If the sample size is small, confirmation that this may have implications for anonymity any other relevant information.

X The proposed method of publication or dissemination of the research findings.

☐ Details of any external contractors or partner institutions involved in the research.

☐ Details of any funding bodies or research councils supporting the research.

☐ Confirmation on any limitations in confidentiality where disclosure of imminent harm to self and/or others may occur.

SECTION H: CONFIDENTIALITY AND ANONYMITY

24. Below is a checklist covering key points relating to the confidentiality and anonymity of participants. Please indicate where relevant to the proposed research.

☐ Participants will be completely anonymised and their identity will not be known by the investigator or researcher(s) (i.e. the participants are part of an anonymous randomised sample and return responses with no form of personal identification)?

☐ The responses are anonymised or are an anonymised sample (i.e. a permanent process of coding has been carried out whereby direct and indirect identifiers have been removed from data and replaced by a code, with no record retained of how the code relates to the identifiers).

X The samples and data are de-identified (i.e. direct and indirect identifiers have been removed and replaced by a code. The investigator or researchers are able to link the code to the original identifiers and isolate the participant to whom the sample or data relates).

☐ Participants have the option of being identified in a publication that will arise from the research.

X Participants will be pseudo-anonymised in a publication that will arise from the research. (I.e. the researcher will endeavour to remove or alter details that would identify the participant.)

☐ The proposed research will make use of personal sensitive data.

☐ Participants consent to be identified in the study and subsequent dissemination of research findings and/or publication.

25. Participants must be made aware that the confidentiality of the information they provide is subject to legal limitations in data confidentiality (i.e. the data may be subject to a subpoena, a freedom of information request or mandated reporting by some professions). This only applies to named or de-identified data. If your participants are named or de-identified, please confirm that you will specifically state these limitations.

YES X NO ☐

If **NO**, please indicate why this is the case below:

NOTE: WHERE THE PROPOSED RESEARCH INVOLVES A SMALL SAMPLE OR FOCUS GROUP, PARTICIPANTS SHOULD BE ADVISED THAT THERE WILL BE DISTINCT LIMITATIONS IN THE LEVEL OF ANONYMITY THEY CAN BE AFFORDED.

SECTION I: DATA ACCESS, SECURITY AND MANAGEMENT

26. Will the Researcher/Principal Investigator be responsible for the security of all data collected in connection with the proposed research? YES X NO ☐

If **NO**, please indicate what alternative arrangements are in place below:

27. In line with the 5th principle of the Data Protection Act (1998), which states that personal data shall not be kept for longer than is necessary for that purpose or those purposes for which it was collected; please state how long data will be retained for.

☐ 1-2 years ☐ 3-5 years X 6-10 years ☐ 10> years

NOTE: In line with Research Councils UK (RCUK) guidance, doctoral project data should normally be stored for 10 years and Masters level data for up to 2 years

28. Below is a checklist which relates to the management, storage and secure destruction of data for the purposes of the proposed research. Please indicate where relevant to your proposed arrangements.

☐ Research data, codes and all identifying information to be kept in separate locked filing cabinets.

☐ Research data will only be stored in the University of Essex OneDrive system and no other cloud storage location.

X Access to computer files to be available to research team by password only.

☐ Access to computer files to be available to individuals outside the research team by password only (See **23.1**).

☐ Research data will be encrypted and transferred electronically within the UK.

☐ Research data will be encrypted and transferred electronically outside of the UK.

NOTE: Transfer of research data via third party commercial file sharing services, such as Google Docs and YouSendIt are not necessarily secure or permanent. These systems may also be located overseas and not covered by UK law. If the system is located outside the European Economic Area (EEA) or territories deemed to have sufficient standards of data protection, transfer may also breach the Data Protection Act (1998).

Essex students also have access the 'Box' service for file transfer: https://www.essex.ac.uk/student/it-services/box

X Use of personal addresses, postcodes, faxes, e-mails or telephone numbers.

☐ Collection and storage of personal sensitive data (e.g. racial or ethnic origin, political or religious beliefs or physical or mental health or condition).

X Use of personal data in the form of audio or video recordings.

X Primary data gathered on encrypted mobile devices (i.e. laptops).

NOTE: This should be transferred to secure University of Essex OneDrive at the first opportunity.

X All electronic data will undergo secure disposal.

NOTE: For hard drives and magnetic storage devices (HDD or SSD), deleting files does not permanently erase the data on most systems, but only deletes the reference to the file. Files can be restored when deleted in this way. Research files must be overwritten to ensure they are completely irretrievable. Software is available for the secure erasing of files from hard drives which meet recognised standards to securely scramble sensitive data. Examples of this software are BC Wipe, Wipe File, DeleteOnClick and Eraser for Windows platforms. Mac users can use the standard ‘secure empty trash’ option; an alternative is Permanent eraser software.

X All hardcopy data will undergo secure disposal.

NOTE: For shredding research data stored in hardcopy (i.e. paper), adopting DIN 3 ensures files are cut into 2mm strips or confetti like cross-cut particles of 4x40mm. The UK government requires a minimum standard of DIN 4 for its material, which ensures cross cut particles of at least 2x15mm.

29. Please provide details of individuals outside the research team who will be given password protected access to encrypted data for the proposed research.

N/A

30. Please provide details on the regions and territories where research data will be electronically transferred that are external to the UK:

N/A

SECTION J: PUBLICATION AND DISSEMINATION OF RESEARCH FINDINGS

30. How will the results of the research be reported and disseminated? *(Select all that apply)*

X Peer reviewed journal

☐ Non-peer reviewed journal

☐ Peer reviewed books

☐ Publication in media, social media or website (including Podcasts and online videos)

X Conference presentation

☐ Internal report

☐ Promotional report and materials

☐ Reports compiled for or on behalf of external organisations

X Dissertation/Thesis

☐ Other publication

☐ Written feedback to research participants

☐ Presentation to participants or relevant community groups

☐ Other (Please specify below)

SECTION K: OTHER ETHICAL ISSUES

31. Are there any other ethical issues that have not been addressed which you would wish to bring to the attention of Tavistock Research Ethics Committee (TREC)?

No

SECTION L: CHECKLIST FOR ATTACHED DOCUMENTS

32. Please check that the following documents are attached to your application.

☐ Letters of approval from any external ethical approval bodies (where relevant)

X Recruitment advertisement

X Participant information sheets (including easy-read where relevant)

X Consent forms (including easy-read where relevant)

☐ Assent form for children (where relevant)

☐ Letters of approval from locations for data collection

X Questionnaire

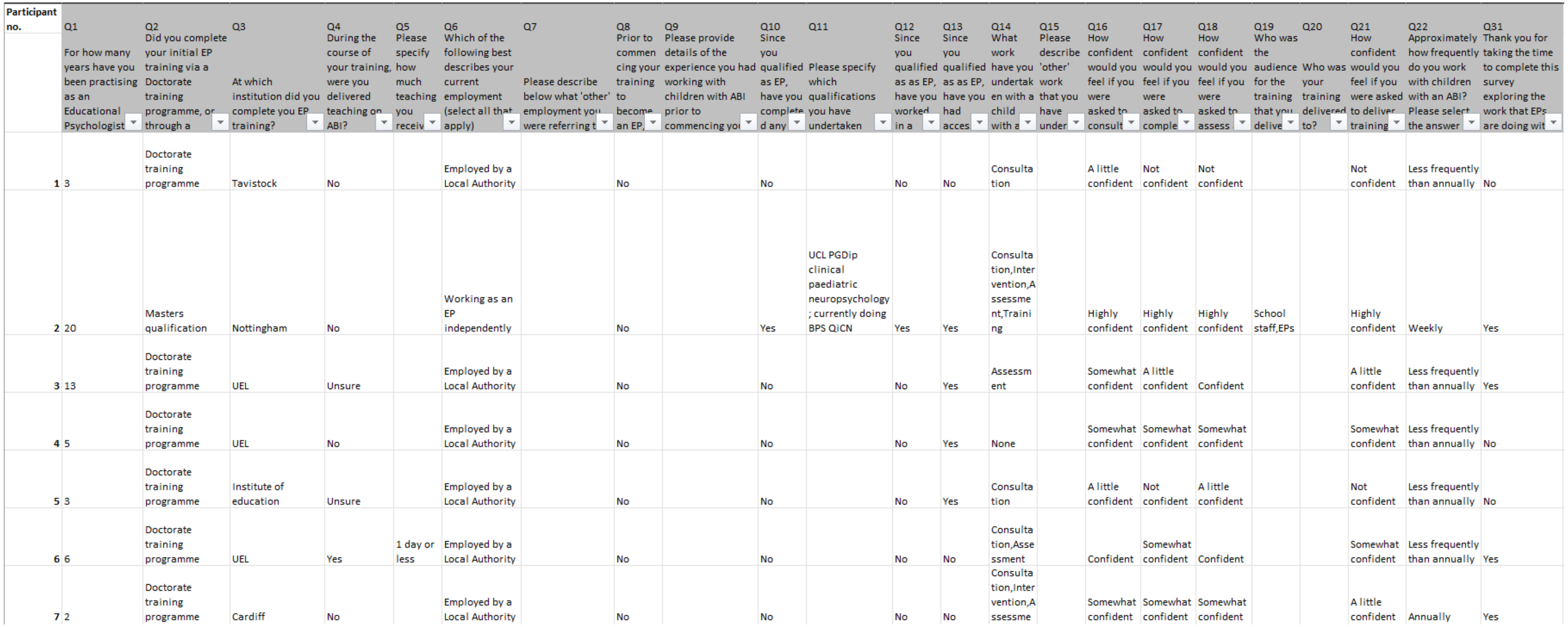
X Interview Schedule or topic guide

☐ Risk Assessment (where applicable)

☐ Overseas travel approval (where applicable)

34. Where it is not possible to attach the above materials, please provide an explanation below.

Appendix M: Raw data from phase 1 (quantitative)



Participant no.	Q1 For how many years have you been practising as an Educational Psychologist	Q2 Did you complete your initial EP training via a Doctorate training programme, or through a	Q3 At which institution did you complete you EP training?	Q4 During the course of your training, were you delivered teaching on ABI?	Q5 Please specify how much teaching you receiv	Q6 Which of the following best describes your current employment (select all that apply)	Q7 Please describe below what 'other' employment you were referring t	Q8 Prior to commencing your training to become an EP,	Q9 Please provide details of the experience you had working with children with ABI prior to commencing yo	Q10 Since you qualified as EP, have you completed any	Q11 Please specify which qualifications you have undertaken	Q12 Since you qualified as as EP, have you worked in a	Q13 Since you qualified as as EP, have you had acces	Q14 What work have you undertaken with a child with a	Q15 Please describe 'other' work that you have under	Q16 How confident would you feel if you were asked to consult	Q17 How confident would you feel if you were asked to comple	Q18 How confident would you feel if you were asked to assess	Q19 Who was the audience for the training that you delive	Q20 Who was your training delivered to?	Q21 How confident would you feel if you were asked to deliver training	Q22 Approximately how frequently do you work with children with an ABI? Please select the answer	Q31 Thank you for taking the time to complete this survey exploring the work that EPs are doing wit
1	3	Doctorate training programme	Tavistock	No		Employed by a Local Authority		No		No		No	No	Consultation		A little confident	Not confident	Not confident			Not confident	Less frequently than annually	No
2	20	Masters qualification	Nottingham	No		Working as an EP independently		No		Yes	UCL PGDip clinical paediatric neuropsychology ; currently doing BPS QiCN	Yes	Yes	Consultation,Intervention,Assessment,Training		Highly confident	Highly confident	Highly confident	School staff,EPs		Highly confident	Weekly	Yes
3	13	Doctorate training programme	UEL	Unsure		Employed by a Local Authority		No		No		No	Yes	Assessment		Somewhat confident	A little confident	Confident			A little confident	Less frequently than annually	Yes
4	5	Doctorate training programme	UEL	No		Employed by a Local Authority		No		No		No	Yes	None		Somewhat confident	Somewhat confident	Somewhat confident			Somewhat confident	Less frequently than annually	No
5	3	Doctorate training programme	Institute of education	Unsure		Employed by a Local Authority		No		No		No	Yes	Consultation		A little confident	Not confident	A little confident			Not confident	Less frequently than annually	No
6	6	Doctorate training programme	UEL	Yes	1 day or less	Employed by a Local Authority		No		No		No	No	Consultation,Assessment		Confident	Somewhat confident	Confident			Somewhat confident	Less frequently than annually	Yes
7	2	Doctorate training programme	Cardiff	No		Employed by a Local Authority		No		No		No	No	Consultation,Intervention,Assessme		Somewhat confident	Somewhat confident	Somewhat confident			A little confident	Annually	Yes

8	6	Doctorate training programme	UCL	Unsure		Employed by a Local Authority		Yes	Working with children with disabilities as an LSA and Portage practitioner	No		No	No	Consultation,Assessment		Highly confident	Confident	Confident			A little confident	Termly	No
9	5	Doctorate training programme	UCL	No		Employed by a Local Authority,Other	Private self employed work as EP for organisation providing neurorehabilitation for cyp with acquired brain injuryj	Yes	Secondary school LSA. Encephalitis, tumour	No		Yes	Yes	Consultation,Intervention,Assessment		Confident	Confident	Confident			Confident	Monthly	Yes
10	9	Doctorate training programme	Ucl	No		Employed by a Local Authority		Yes	Special school for children with SLD some of whom via ABI	No		Yes	Yes	Consultation,Assessment		Confident	Confident	Confident			Somewhat confident	Annually	Yes
11	18	Masters qualification	UEL	Unsure		Employed by a Local Authority		No		No		No	No	Consultation,Assessment		Confident	Somewhat confident	Confident			Not confident	Less frequently than annually	No

12	5	Doctorate training programme	UCL	No		Working within an NHS/Clinical setting with children with ABI		No		No		No	Yes	Consultation,Intervention,Assessment		Confident	Confident	Confident			Somewhat confident	Weekly	Yes
13	2	Doctorate training programme	UEL	Yes	1 day or less	Employed by a Local Authority		Yes	I worked with children with non-traumatic nrain injuries, their parents and teachers	No		No	No	Consultation,Intervention		Somewhat confident	Somewhat confident	Somewhat confident			A little confident	Annually	No
14	9	Doctorate training programme	Tavistock	No		Employed by a Local Authority		Yes	Pupil who had meningitis.	No		No	No	Consultation,Assessment		Somewhat confident	A little confident	Confident			Somewhat confident	Termly	No
15	I4	Doctorate training programme	UCL	Yes	1 day or less	Working as an EP independently, Working within an NHS/Clinical setting with children with ABI		No		Yes	PGDip Paediatric Neuropsychology	Yes	Yes	Consultation,Intervention,Assessment,Training,Other	Trauma therapy, developing systems and pathways with CYP with ABI, creating as advisory groups, joint presentations	Highly confident	Highly confident	Highly confident	School staff,EPs, Parents, Other	Early help services, hospital teams, CAMHS, EP services and doctoral courses	Highly confident	Daily	Yes
16	22	Masters qualification	Newcastle	Yes	1 day or less	Working as an EP independently		No		No		Yes	Yes	Consultation,Intervention,Assessment,Traini		Confident	Confident	Highly confident	School staff,EPs, Parents, Other	parents, child, social workers, schools	Highly confident	Annually	Yes

17	16	Masters qualification	UCL	No		Working as an EP independently		Yes	Special needs children’s centre	No		No	Yes	Consultation,Assessment		Somewhat confident	A little confident	Somewhat confident			A little confident	Less frequently than annually	No
18	10	Doctorate training programme	Newcastle University	No		Employed by a Local Authority		No		No		No	No	Consultation,Assessment		Somewhat confident	Somewhat confident	Somewhat confident			Somewhat confident	Annually	No
20	5 years	Doctorate training programme	Newcastle university	Yes	3 days or more	Working within an NHS/Clinical setting with children with ABI		Yes	Behavioural difficulties is common with them,some tend to be aggressive and lack social judgement which affects their relationship with family and friends.	No		Yes	Yes	Consultation,Intervention,Assessment,Training		Confident	Confident	Confident	School staff,EPs, Parents		Confident	Weekly	Yes
21	2 years	Doctorate training programme	Cardiff university	Yes	2 days	Employed by a Local Authority		No		Yes	A doctoral degree in psychology and neuropsychology concentration	Yes	Yes	Consultation,Intervention,Assessment,Training		Confident	Confident	Confident	School staff,EPs, Parents		Confident	Daily	Yes

22	3 years	Doctorate training programme	Cardiff university	Yes	3 days or more	Working as an EP independently, Working within an NHS/Clinical setting with children with ABI		Yes	They often feel left out in society and hence makes them react negatively with those around them	Yes	Doctorate degree in psychology and neuropsychology	Yes	Yes	Consultation,Intervention,Assessment,Training		Highly confident	Highly confident	Confident	School staff,EPs, Parents, Other	Other individuals with ABI	Highly confident	Daily	Yes
33	3	Doctorate training programme	UEL	Yes	1 day or less	Employed by a Local Authority		No		No		No	No	Consultation,Assessment		Somewhat confident	A little confident	Somewhat confident			A little confident	Annually	No
34	10	Doctorate training programme	IoE	No		Other	I work for a MAT	Yes	I worked in a CAMHS Tier 2 and 3 service, working with young people with ABI	Yes	Modules in Child Paediatric Neuropsychology , UCL	No	Yes	Consultation,Assessment,Training		Confident	Confident	Confident	School staff,EPs		Confident	Less frequently than annually	Yes
35	10	Doctorate training programme	Uel	Yes	1 day or less	Employed by a Local Authority		No		No		No	No	Other	N A	Somewhat confident	A little confident	A little confident			Somewhat confident	Less frequently than annually	No
36	1	Doctorate training programme	Tavi	Unsure		Employed by a Local Authority		No		No		No	No	Consultation,Assessment		Somewhat confident	Not confident	Somewhat confident			A little confident	Annually	Yes

37	19	Masters qualification	Southampton	No		Working as an EP independently		No		No		No	No	Consultation,Assessment		A little confident	Not confident	Somewhat confident			Not confident	Less frequently than annually	Yes
38	4	Doctorate training programme	University college London	Yes	3 days or more	Working as an EP independently, Other	Community Interest Group	Yes	Worked in a special school	No		Yes	Yes	Consultation,Intervention,Assessment,Traini		Confident	Highly confident	Highly confident	School staff,EPs, Parents		Confident	Annually	Yes
39	22	Masters qualification	Birmingham	Unsure		Employed by a Local Authority		No		No		No	Yes	Consultation,Assessment		A little confident	A little confident	A little confident			Not confident	Less frequently than annually	Yes
48	6	Doctorate training programme	Nottingham	No		Employed by a Local Authority		Yes	Playworker at a playscheme for children with additional needs, which included ABI for some children	No		No	No	Assessment		A little confident	Not confident	A little confident			A little confident	Less frequently than annually	No
50	0	Doctorate training programme	University of East London	No		Employed by a Local Authority		No		No		No	No	None		Not confident	Not confident	Not confident			Not confident	Never	No
53	5	Doctorate training programme	IOE	No		Employed by a Local Authority		No		No		No	No	Consultation,Assessment		Confident	Somewhat confident	Confident			A little confident	Annually	No
54	1	Doctorate training programme	University of Nottingham	Yes	1 day or less	Employed by a Local Authority		No		No		No	No	None		A little confident	A little confident	A little confident			Not confident	Less frequently than annually	Yes

55	3	Doctorate training programme	Bristol University	No		Employed by a Local Authority		Yes	specialist provision as a teaching assistant where there were a couple of children with ABI. Although none were in my class, some took part in some interventions or clubs I ran	No		No	Yes	Consultation,Assessment		Somewhat confident	Somewhat confident	A little confident			Not confident	Less frequently than annually	No
56	18	Masters qualification	Institute of Education	No		Employed by a Local Authority		No		No		No	Yes	Consultation,Assessment		Confident	Confident	Confident			Somewhat confident	Annually	Yes
57	9	Doctorate training programme	University of Birmingham	Unsure		Employed by a Local Authority,Working as an EP independently		No		No		No	No	Consultation,Assessment		Not confident	Not confident	Not confident			Not confident	Less frequently than annually	No
58	34	Doctorate training programme	Birmingham then UCL	No		Employed by a Local Authority		Yes	I was a teacher (secondary) and responsible for the SEND groups in my subject areas (science).	No		Yes	Yes	Consultation,Intervention,Assessment,Training,Other	Talks to interest groups such as CHIT (Children's Head Injury Trust)	Confident	Somewhat confident	Confident	Other	CHIT (Children's Head Injury Trust)	Confident	Less frequently than annually	Yes
59	30	Masters qualification	Sheffield University	No		Employed by a Local Authority		No		No		No	Yes	Consultation,Intervention		Confident	Somewhat confident	A little confident			Not confident	Annually	Yes
60	4	Doctorate training programme	University of Nottingham	No		Employed by a Local Authority		No		No		No	No	Consultation,Assessment		A little confident	A little confident	Somewhat confident			Not confident	Annually	Yes
61	1	Doctorate training programme	Manchester	No		Employed by a Local Authority		No		No		No	No	None		A little confident	Not confident	A little confident			Not confident	Never	No
62	2	Doctorate training programme	The University of Manchester	No		Employed by a Local Authority		No		No		No	No	Consultation,Assessment		Not confident	Not confident	Not confident			Not confident	Less frequently than annually	No
63	1	Doctorate training programme	Southampton	No		Employed by a Local Authority		No		No		No	No	Assessment		Somewhat confident	Somewhat confident	Somewhat confident			Somewhat confident	Annually	No
64	7	Doctorate training programme	Tavi	No		Employed by a Local Authority		No		No		No	Yes	Consultation,Assessment		Confident	Confident	Confident			Confident	Annually	Yes
65	10	Doctorate training programme	Tavistock	Yes	I don't remember how much	Employed by a Local Authority		No		No		No	No	Assessment		Somewhat confident	Somewhat confident	Somewhat confident			A little confident	Less frequently than annually	No