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Research paper

Exploring pre-service physical education teachers' trauma-related learning experiences in schools

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H I G H L I G H T S

- Working with trauma-affected pupils during school placement can be emotionally challenging for pre-service PE teachers.
- Exploring and understanding the school community can support pre-service PE teachers' trauma-related learning.
- Developing positive relationships is an important feature of trauma-related learning for pre-service PE teachers.
- Experienced teachers can support pre-service PE teachers' trauma-related learning on placement.
- The trauma-aware principles developed by Quarmby et al. (2022) can aid reflective dialogue around trauma-aware practice.

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A B S T R A C T

This paper explores pre-service physical education (PE) teachers' experiences of working with trauma-affected young people whilst on placement in schools. It involved an online professional learning programme which facilitated reflective discussions to explore their experiences. The pre-service teachers revealed that the school context influenced their trauma-related learning, which took place across multiple sites throughout the school, with both teachers and pupils. These findings evidence the need to support pre-service PE teachers' school-based learning, encouraging them to explore the broader context of the school, seek supportive relationships and co-develop strategies to create positive and safe learning environments.

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1. Introduction

Increasingly, more children and young people are encountering 'adverse childhood experiences' (Felitti et al., 1998) and consequently struggling to cope with the impact of trauma, which can have lasting effects on their learning, as well as their health and wellbeing (Howard, 2021; SAMHSA, 2014). Thus, the impact of trauma on young people is highly relevant for all schools and teachers, including those teachers entering into the profession (Brown et al., 2022). An increased recognition of the significance of trauma in recent years has led to a growing interest in the topic

within education, and many schools now identify as being trauma-informed (Hobbs et al., 2019; Rees Centre, 2022; Thomas et al., 2019). This is a whole-school approach in which teachers, with support from senior leaders, are provided with space and time to develop their collective understanding of childhood trauma. This includes how trauma manifests in the behaviours of their pupils and the steps that they can take to support young people on their journey towards healing, learning and growth (Brown et al., 2022; Thomas et al., 2019). Importantly, in becoming trauma-informed, there are likely to be different practices across specific subjects, and some subjects may need to be more acutely aware of trauma and its impacts than others (Quarmby et al., 2022). For example, in physical education (PE), which is the focus of this paper, the centrality of the performing body and the need (at times) for physical contact, distinguish it from most other classroom subjects, and can

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make it feel 'risky' or unsafe for those young people who have experienced trauma (Quarmby et al., 2022). Therefore, teaching approaches in PE (e.g., relating to demonstration, feedback, questioning), and pupils' responses to these, may look and feel very different from those developed and experienced in other areas of the school.

It could be argued that for experienced PE teachers who understand the school, the community and their pupils, becoming trauma-informed through on-going professional learning should be a logical and valuable endeavour. However, for pre-service PE teachers who are placed in schools for relatively short periods, learning to work with young people in PE who have experienced trauma will likely be challenging and stressful (Brown et al., 2022). School-based learning for pre-service PE teachers is an important aspect of their initial teacher education (ITE) (Herold & Waring, 2018). Importantly, there is a growing body of research supporting the need for pre-service PE teachers to be trauma-aware¹ (Ellison & Walton-Fisette, 2022), and offering suggestions for principles that might help to shape practice in this context (Quarmby et al., 2022). However, we currently know little about *how* pre-service PE teachers learn about trauma-affected young people or *how* they learn to develop/enact trauma-informed approaches in the context of their school placements.

Influenced by the work of Dewey (1938), we understand the importance of the school environment and the impact it can have on pre-service PE teachers' learning – and future learning (or growth). Thus, by drawing on research-informed conversations with pre-service PE teachers that focus on specific school-based experiences, we attempt to uncover how, where and with whom they learn. The findings from this research will be relevant for teachers and teacher educators to understand how to order the "objective conditions" in schools to facilitate particular kinds of interactions (Dewey, 1938, p. 44). In other words, to begin to create those educative experiences during school placements that support pre-service PE teachers' current and future learning and practice in this area.

1.1. Understanding the concept and impact of trauma

As noted above, we argue that understanding trauma, and the impacts of trauma on young people, is an important foundation for teachers in becoming trauma-aware. However, research has shown that many educators – including pre-service teachers – feel they lack sufficient knowledge of the concept and are ill-prepared to work with those pupils who have experienced trauma (McClain, 2021). Nonetheless, as Shalka (2015) points out, trauma is an important concept for educators as it "impacts the ways individuals learn and make meaning of their experiences in both negative and positive ways" (p. 21). Trauma has been discussed widely within literature and open-ended definitions of the concept are often adopted – recognising the varied and individualised nature of the experience (Substance Abuse and Mental Health Services Association [SAMHSA], 2014). However, following a review of the multiple definitions of trauma, SAMHSA (2014) identified trauma as resulting from living through "an event, series of events, or set of circumstances that is experienced by an individual as physically or

emotionally harmful or life threatening and that has lasting adverse effects on individual functioning and mental, physical, social, emotional or spiritual wellbeing" (p. 7).

In recent years, discussion about trauma within an educational context has often been framed around the concept of adverse childhood experiences (ACEs) (Chafouleas et al., 2021). Felitti et al. (1998) originally identified ten different ACEs – understood as being stressful events that children and young people (up to the age of 18) may be exposed to whilst growing up. These markers of adversity include those that directly affect a child/young person such as exposure to physical, sexual, or emotional abuse, and physical or emotional neglect. They also include those that affect the environment in which a child/young person grows up (e.g., parental separation, domestic violence, substance misuse, mental illness and incarceration of a family member). More recently, however, the range of ACEs has been expanded to include exposure to events that may occur beyond the home, and which have an impact on health and wellbeing. For instance, Smith (2018) suggests that facing racism, witnessing community violence, living in an unsafe neighbourhood, being bullied, experiencing foster care or suffering the death of a parent, as well as having a lack of food, being exposed to consistent parental arguments, holding low socioeconomic status, showing poor academic performance, having limited social capital and being rejected by peers, should all be considered ACEs.

Importantly, trauma is thought to range from acute trauma (i.e., a single incident that is brief, such as a car accident) to complex trauma (i.e., resulting from exposure to multiple and varied events often of an interpersonal nature such as ongoing abuse or neglect) (National Child Traumatic Stress Network, n. d). Acute trauma is considered less likely to lead to lasting developmental damage, whereas complex trauma – when occurring early in life during childhood and adolescence (Laricchiuta et al., 2023) – can significantly disrupt a child's development (Van der Kolk, 2005). For instance, when a child experiences an ACE – such as abuse or neglect – their stress response system is activated. If, due to repeated exposure to abuse or neglect the stress response system is activated for a prolonged period of time, the body struggles to recover (Franke, 2014). This is known as toxic stress. Without reassurance, support from a caregiver, or secure emotional attachments – which would normally buffer the effects of toxic stress – an individual can become overwhelmed, affecting their capacity to cope (Franke, 2014). Children and young people who are exposed to complex developmental trauma are therefore more likely to be adversely affected in three key areas of development. Neurologically, exposure to complex trauma impacts on the brain and hormonal system, influencing information processing, memory and the ability to regulate emotions, as well as potentially impairing cognition, language development and reasoning (Dye, 2018; Laricchiuta et al., 2023). Physiologically, trauma can result in individuals being more susceptible to chronic diseases, becoming obese and experiencing problems with sleep at a young age and later in life (Greenfield & Marks, 2009). Finally, psychologically, complex trauma may lead to depression, anxiety, anger and aggression, difficulty trusting others and thus, unstable relationships (Dye, 2018).

There are obvious implications here for education and schooling, as the impact of complex childhood trauma can be seen to affect pupils' social, emotional and behavioural aspects of learning and functioning (Avery et al., 2022). Indeed, Quarmby et al. (2022) note that the impacts of traumatic childhood experiences can often be 'played out' within the school context. Additionally, a systematic review by Perfect et al. (2016) suggested that those who had experienced childhood trauma were more likely to demonstrate behaviours that teachers find challenging, attend

¹ The term trauma-aware is used in the context of pre-service teacher learning based on the Missouri Model for Trauma-Informed Schools (Alive and Well Communities Educational Leader's Workgroup, n.d). Within this model, becoming trauma-informed is the ultimate goal in a transformational journey that involves changes in knowledge, practice, culture, policy and systems. The initial steps in this process are changes in knowledge, which lead to changes in practice. These early stages are most relevant to pre-service teacher learning and are defined as becoming trauma-aware.

infrequently and drop out altogether. Hence, for some children, experiencing trauma may lead to challenges associated with academic performance, school behaviour and forming relationships with peers (Honsinger & Brown, 2019).

1.2. Schools, pre-service teachers and professional learning

Honsinger and Brown (2019) note that “students who have experiences of trauma exist in every school and community” (p. 130). As such, teachers are in a very important position to both identify and support young people who have experienced trauma, regardless of the trauma-informed status of their school. It is argued that teachers are often the most stable adult in a young person’s life, someone who they can develop a positive relationship with, supporting their growth and development (Stokes & Brunzell, 2019) and ensuring their safety and protection (Walsh et al., 2011). In the context of PE, the interactive nature of activities undertaken in varied environments is perceived to offer notable opportunities in this regard, with PE teachers particularly well-placed to shape caring, safe and culturally sensitive learning spaces (Ellison & Walton-Fisette, 2022; O’Donnell et al., 2019; Sandford et al., 2021). It is important, therefore, that teachers – in any context, but perhaps particularly in PE – understand trauma and its impact on the development of young people, so that they can comprehend the steps that they can take to proactively support their pupils’ learning (Brunzell et al., 2022).

To develop this awareness of how trauma can impact children, teachers require support through opportunities for professional learning. This might involve the provision of relevant resources, access to support networks, clarity around roles and responsibilities, as well as space for reflection and professional growth (Brown et al., 2022). While not without challenges, engaging in professional learning around trauma can lead to improved teacher knowledge, confidence and wellbeing (Avery et al., 2022). Meanwhile, for pupils who have experienced trauma, it can result in reduced anxiety and depression, improved self-esteem and increased academic engagement and achievement (Berger, 2019; Reddig & VanLone, 2022). However, although the challenges of engaging in professional learning around trauma for in-service teachers are likely to be significant due to, for example, lack of time, increased workload and emotional fatigue (Brown et al., 2022), we argue that they are also significant for those entering into the profession. Pre-service teachers are placed in schools for relatively short periods of time, limiting opportunities to know and understand their pupils, the school and the local community, with very few (if any) previous experience or professional learning opportunities related to trauma. Indeed, while we know something about the trauma-related professional learning of in-service teachers generally, there is a gap in the literature in relation to how pre-service teachers learn about trauma-affected young people and trauma-informed practices (Brown et al., 2022; Reddig & VanLone, 2022), including within the field of PE (Quarmby et al., 2022).

Research to date suggests that few pre-service teachers receive any professional learning relating to trauma (Hobbs et al., 2019, pp. 1–26; Reddig & VanLone, 2022) which can have a limiting effect on their knowledge of and attitude towards trauma and trauma-informed practice, as well as their confidence in working with young people who have experienced trauma (Brown et al., 2022). However, those studies that have explored trauma-aware initiatives within the context of ITE have generally reported positive findings around improved confidence, knowledge and skills, as well as an awareness of and appreciation for the importance of reflecting on personal wellbeing (Kearns & Hart, 2017; Walsh et al., 2011).

Interestingly, a common feature across those initiatives is the importance of constructing knowledge through opportunities which connect learning to practice and experience (Kearns & Hart, 2017; Walsh et al., 2011). Importantly, while this research was not carried out in the context of ITE in PE, the significance of school-based learning for pre-service PE teachers has been previously noted (Herold & Waring, 2018).

1.3. Understanding pre-service physical education teacher learning

Several authors have drawn from the work of Dewey to explore and understand in-service PE teachers’ school-based learning (Armour et al., 2012, 2017; Coleman et al., 2021), which is also relevant in relation to the placement-based, trauma-aware learning of pre-service PE teachers. From a Deweyan perspective, learning is understood as growth, a continuous reconstruction of experience as teachers (their needs, desires, capacities) interact with their environment (Dewey, 1938). As individuals move from one situation to another, their past learning becomes an instrument for dealing with those situations that follow, a process that “goes on as long as life and learning continue” (Dewey, 1938, p. 44). Thus, although Dewey (1916) argues that education should be about going somewhere (Casey & Quennerstedt, 2020), there is no endpoint. Education as growth suggests that we are always in a state of becoming (Dewey, 1916). Importantly, for experiences to be educative, the environmental conditions must be ordered in such a way that they satisfy individual needs, and thus promote continued learning and growth. To support pre-service teacher learning, therefore, it is important to understand both the internal *and* the objective conditions that lead to educative experiences (Schmidt & Allsup, 2019).

Central to this understanding of teacher learning is the role of reflection, a form of thinking and doing, or “good habits of thinking” (Dewey, 1916, p. 159), directed towards improving knowledge and practice (Hall & Gray, 2016). For Dewey (1938), reflecting on experience facilitates growth as it both encourages individuals to develop new insights and motivates them to sustain their learning (Dewey, 1916). Thus, reflective practice is a highly personal, inherently emotive and embodied process (Hall & Gray, 2016), one that can be intensified for pre-service teachers working in complex school environments, encountering many new and challenging experiences. Indeed, Schmidt and Allsup (2019) suggest that beginning teachers must learn to engage in “productive reflection” (p. 6) in order to reframe their ‘felt’ experiences as problems to be solved. Importantly, however, reflection does not always result in a positive learning experience or improvement in practice (Attard & Armour, 2006), and many pre-service teachers may need support to engage in “productive reflection” (Schmidt & Allsup, 2019, p. 6) to ensure its (positive) learning potential (Armour et al., 2012). During school placements, this support is likely to come from more experienced teachers, working with pre-service teachers to guide their reflections in order to focus their learning, identify challenges and find solutions to problems (Hemphill et al., 2021). However, while working with more experienced teachers is understood as important and necessary for pre-service teachers (Lee & Loughran, 2000), research also indicates that some relationships do not always result in positive learning or wellbeing outcomes (Herold & Waring, 2018; Kearns & Hart, 2017). For example, tensions can develop when the beliefs and practices of the pre-service teachers clash with those of established teachers, resulting in stress and demotivation (Kearns & Hart, 2017).

Given the importance of placement experiences for pre-service PE teachers’ learning (Herold & Waring, 2018) – and for the subsequent learning experiences of their pupils – we argue that

trauma-aware learning on placement should not be left to chance. Further research is therefore warranted to better understand how pre-service PE teachers learn about trauma during their placements and how they plan for, and respond to, young people who have experienced trauma.

Consequently, the purpose of this study is to explore the placement-based learning experiences of pre-service PE teachers, focusing on those situations when they encounter young people who may have experienced trauma. In understanding learning as growth of experience (Dewey, 1938) through our interactions with, and reflections on, our environment, we aim to uncover how, where and with whom this learning takes place. This may identify opportunities for ITE, teachers and mentors to (re)order the objective conditions of schools to facilitate pre-service PE teachers' learning and support their growth-enhancing "habits of thinking" (Dewey, 1916, p. 159) around trauma.

2. Methods

This paper emerged from an online professional learning programme designed to support pre-service PE teachers in the UK in becoming trauma-aware. The programme was based on our previous experiences and research with care-experienced youth and practitioners in PE, physical activity and sport-related contexts and was underpinned by five interconnected and evidence-informed principles developed as part of this work to support PE teachers in becoming trauma-aware (Quarmby et al., 2022). The principles include: (1) ensuring safety and wellbeing, (2) establishing routines and structures, (3) developing and sustaining positive relationships that foster a sense of belonging, (4) facilitating and responding to youth voice and, (5) promoting strengths and self-belief. The principles were used during the programme workshops to identify experiences, stimulate reflections, and encourage discussions related to trauma-aware practice in schools broadly, as well as in PE specifically.

2.1. Participants and sampling

The programme involved working with three distinct groups of pre-service PE teachers ($n = 22$). Two groups were recruited from the ITE programmes associated with the research team, and one group was recruited using social media (e.g., Twitter). Consequently, this third group included pre-service teachers from a range of universities and one early career PE teacher from Australia. Most of the pre-service teachers who attended were female ($n = 18$), self-identified as white ($n = 20$), and were predominantly aged under 25 ($n = 19$). The vast majority of participants were either in their penultimate or final year of a 4-year undergraduate ITE programme that led to qualified teacher status ($n = 12$) or undertaking a 1-year postgraduate programme (Post Graduate Certificate in Education or Post Graduate Diploma in Education) from universities in the UK ($n = 9$). As mentioned above, an early career PE teacher from Australia responded to the social media call for participants ($n = 1$). As they were interested in learning about trauma in PE, the research team agreed that they could participate in the workshops. However, their data was not included in the subsequent data analysis.

A common feature of all programmes was that they included a combination of university-based and secondary school-based (placement) learning experiences. Furthermore, although previous experiences of learning about, and working with, trauma-affected young people varied across participants, none of them claimed to be knowledgeable about the impact of trauma in schools broadly, or PE specifically, prior to the workshops.

2.2. Participatory workshops

The programme consisted of two online workshops (each lasting 2 hours) which were delivered to each of the three individual groups, between May and August 2021. It is important to note that, given the sensitive nature of the research topic, one of our main aims during the workshops was to protect the wellbeing of the participants. We attempted to do this by creating a safe space for them to contribute, with frequent 'check-ins', opportunities to 'opt-out' and being available before and after each workshop should any of the pre-service teachers wish to discuss any issues or raise concerns.

In *workshop one*, participants explored their understanding of trauma, its impacts on young people and how it might manifest in PE. To do this, the workshop included a brief presentation of key research findings, individual activities and group tasks. Importantly, the workshop also provided a space for the participants to reflect on what they already knew about trauma and how it might shape pupils' engagement with school and with PE. To support these reflections and discussions, we purposely invited the participants to engage in the workshops during their school placement and encouraged them to share and reflect on their placement learning in light of their current knowledge and experience. In addition, we set a homework task to ask the pre-service teachers to consider their learning from workshop one and use this to, again, reflect on some of their previous school placement experiences. In line with our attempts to protect the wellbeing of the participants and maintain the 'safe space' we created during the workshop, the participants could complete this task individually, in pairs or in groups, depending on how they felt most comfortable.

In *workshop two*, undertaken at least one week after the first workshop, participants were invited to critically reflect on their learning from the first workshop, their own practice, and the five principles of trauma-aware pedagogies (Quarmby et al., 2022). They were then invited to consider, in conversation with us (as workshop leaders) and each other, how these principles could be enacted in practice during various 'PE Moments' (e.g., transitions into PE, getting changed, responding to incidents). To do this, breakout rooms were used within Microsoft Teams whereby we, the authors, acted as facilitators, inviting, sharing, and listening to stories from different individuals in order to generate ideas (Smith et al., 2023). These discussions drew on the varied knowledge and experiences of all participants – including our own work with trauma-affected youth in different contexts.

2.3. Data collection and analysis

Ethical approval was granted by the third author's host institution prior to the workshops taking place. All of the participants were provided with an informed consent form, which outlined: the purpose of the study, the format of and topics included in each workshop, data collection procedures, as well as issues related to confidentiality, benefits and risks. Participants were informed that the research had the potential to cause inadvertent distress due to the nature of the topic under investigation, but also that they had the right to withdraw from the research at any time. Furthermore, as mentioned above, we aimed to protect participants' wellbeing throughout the research process by creating a space where they felt supported, both emotionally and professionally.

To support data collection, key questions and discussion points/tasks were built into workshops one and two (see above) to generate reflections and discussions between researchers and participants. For example, participants were asked to discuss the following questions in a breakout room, with each other and members of the research team.

1. Have you witnessed behaviour that might be the result of trauma (a) in school, (b) in PE?
2. How did it make you feel? What did you think about the situation?
3. Did you do anything? If so, what?

These conversations allowed for the exploration of relevant topics as they might emerge (Sparkes & Smith, 2014). The reflections and discussions generated by the questions and discussion points/tasks in each of the workshops were recorded using the Microsoft Teams record function, and subsequently converted into an audio file for transcription. In addition, text from the Microsoft Teams 'chat' function was transferred to a Microsoft Word file. All audio file transcripts and copies of the 'chats' were made anonymous to protect the identity of the participants.

The analysis of data for the present study was carried out by authors one and two. The first stage of this analysis involved highlighting those 'situations' (Dewey, 1938) where participants discussed their experiences of working with young people who had experienced trauma - based either on information that had been provided by the school or their own perceptions formed by, for example, observing pupils exhibiting challenging behaviours. Then, guided by our understanding of learning as experiential, that is, emerging from the individual's interactions with their environment (Dewey, 1938), this highlighted text was examined and organised according to the following categories.

- A description of the incident/experience
- A description of how the pre-service teachers' learning occurred (e.g., by observing, experiencing, reflecting)
- Others involved in this learning experience
- Where this learning experience took place
- Any policies, processes, materials or objects involved in the pre-service teachers' learning.

A table was created with headings that reflected the above detail and notes were taken under each heading to capture and categorise all the relevant information. Initially, this process was carried out by the first author. The second author then reviewed the completed tables against the transcripts. The aim of the second author was to check that both authors interpreted the learning experiences in the same way and to ensure that all the relevant details had been captured and accurately categorised. Both researchers discussed all discrepancies/gaps until agreement was reached.

Once all the relevant detail had been captured, authors one and two read through the tables generated from each transcript and engaged in a constant comparison approach (Glaser & Strauss, 1967) to group similar categories from the tables together— firstly within each table (or workshop) and then across tables. For example, in grouping those instances where the participants discussed the role/position of the pupil during the 'experience' (i.e., observed, discussed, reported), the theme 'Learning with/from Pupils' was generated. Both researchers generated themes independently before coming together to agree on the main themes for discussion.

3. Discussion of results

In the text that follows, we present the main themes identified from our analysis, highlighting the "objective conditions" (Dewey, 1938, p. 44) experienced by pre-service teachers that appear to have some influence over how they become trauma-aware. These are.

- i) The school landscape (e.g., geographical location, demographics and school-specific policies)
- ii) The significance of the PE space (physical space and safe space), and
- iii) Learning experiences (learning directly from challenging situations, learning with/from other teachers and learning with/from pupils).

Before we explore each theme, it is important to re-emphasise that, embedded within each – and critical to pre-service PE teacher learning – is the act of reflection (Dewey, 1916; Schmidt & Allsup, 2019). Learning does not take place by experience alone, reflection is an important and necessary feature of teacher learning (Armour et al., 2017; Schmidt & Allsup, 2019). As noted above, the workshops were designed to foster reflective thinking, encouraging the participants to draw from their previous placement experiences to make connections with the five interconnected principles of trauma-aware pedagogies and their future teaching and learning. In doing so, it became apparent that much of the pre-service PE teachers' learning derived from their reflections on specific events they had observed or experienced on placement, which at times were emotional, social and/or critical. It is difficult to determine exactly when their *initial* reflections took place (for example, at the time of their experience or during the workshop). However, in sharing their reflections during the workshops, it is possible to explore the context of their experiences and uncover where, how and who the pre-service PE teachers interacted with, and consider how this knowledge might support other pre-service teachers, school-based mentors and teacher educators.

3.1. The school landscape

When reflecting on their learning experiences during placement, the participants made reference to the context of the school in terms of where it was located, whether or not the school provided them with information about young people who may have experienced trauma, the values or ethos of the school and class sizes. For example, "and similarly, there's quite a lot of trauma within the school" there's quite a wide range of socio-economic culture in the town, but also there's a children's residential home in the town, which caters to quite a large area, so whether the kids are from there or not, they then will go to the school that I am teaching at. (Edie, female, Group 1, 4-year programme).

In this way, the pre-service PE teachers recognised the school landscape – and the broader community in which it is located – as an important feature of becoming trauma-aware. Literature also highlights the importance of context in terms of understanding the experiences of trauma-affected young people and how to support their learning and development (Hobbs et al., 2019; Stokes & Brunzell, 2019). Indeed, Hobbs et al. (2019) suggest that pre-service teachers should focus firstly on understanding the school context (i.e., local communities, policies, the causes and manifestations of trauma in young people) before learning how to develop and enact trauma-informed approaches. Supporting this view, O'Toole (2022) emphasises "the need to support educators in developing a rich contextual understanding of their students' lives and a deep appreciation of the various strengths and challenges that exist in the particular communities they serve (Alvaraz, 2017)" (p. 5). In this respect, Edie's recognition that pupils coming from the residential children's home might have experienced trauma, that they bring with them to school, is somewhat pertinent and, encouragingly, can be seen to align with National Guidelines for Trauma Aware Education (see Howard, 2021).

For the participants, contextual learning also included school policy in relation to what information was made available to them about their pupils. This was an important issue for the participants, perhaps due to the different experiences that some of them had across placement schools. For example, Alice (female, Group 2, 1-year programme) noted that “I found that my first placement was really good at that ... My second placement I have no clue, we only get emails like if there, let's say, if there's a safeguarding issue”. Such experiences were not uncommon and are also reflected in research investigating the educational experiences of marginalised youth. For example, research with teachers regarding their engagements with care experienced young people has noted that many educators are often unaware as to the care status of their pupils (O'Donnell et al., 2019; Sandford et al., 2021).

Differences between schools in relation to this aspect of practice encouraged the participants to reflect upon the contexts they deem to be more or less helpful for their learning. Overwhelmingly, it was understood as positive and supportive if they were provided with information about their pupils, helping them to plan for learning and understand pupils' behaviour during their lessons. Not having this information was perceived to be unhelpful, as indicated again by Alice (Group 2, 1-year programme):

I only found out today that one of the students was a looked-after child because my mentor told me and I didn't really have any information ... so I think, I know it's tough in schools but you do need to know in order to help that child and, say if they are being disruptive, you know they've clearly got a lot of issues going on.

Sharing information about pupils is reflective of a whole-school trauma-informed approach, where teachers are informed about the experiences and needs of their pupils (Avery et al., 2022; Stokes & Brunzell, 2019), thereby influencing the culture of the school and of the classroom. The successful development of such a culture comes from the school leadership through the collective development of their teachers. We argue, however, that this should also include pre-service teachers – supporting them to understand the school community, their pupils' lives and the impact of trauma. Notably, the pre-service PE teachers we spoke to did not explicitly suggest that they taught in a trauma-informed school. However, supporting pre-service teachers in this way – by helping them to understand the contexts, experiences and challenges of the young people that they are teaching – will mean they are better prepared to support pupils' learning (or at least, do them no further harm), and at the same time support their own health and wellbeing.

3.2. The significance of the physical education space

3.2.1. Physical space

The pre-service PE teachers revealed that their experiences with young people who may have experienced trauma were located in a variety of different physical spaces. These included the changing rooms, the athletics track, corridors and the staff room. For example, Erica (Group 1, female, 4-year programme) described an incident with a pupil that took place at the athletics track that was located some distance away from the school: “but there was one day where we [were] outside doing athletics and around the athletics track we had a big, kind of about 10-foot fence, and I turned my back for like 30 s and he was at the top of the fence”.

Quarmby et al. (2022) previously highlighted the PE space as challenging for young people who have experienced trauma. In particular, the public nature of the PE space and the way in which the moving body is on show to others. They also suggest that

changing rooms are particularly 'charged' spaces, where bodies and PE kit are on show, sometimes in the absence of the teacher. This is especially challenging for those who have experienced trauma in the form of physical abuse (Quarmby et al., 2022). The participants also recognised the changing rooms as a particularly problematic space, as described here by Lauren (Group 1, female, 4-year programme):

And me, myself, you're not allowed to physically go into the boys' changing rooms, you can pop your head through, but you're not allowed to go and stand in there so then again, something could have happened, quite a few times there was lessons that I had where I done the register, and everything seemed fine. But then when they came outside you thought no, something happened in the changing room, but you've not witnessed it because you're not allowed to be in the boys' changing rooms, and that makes it a bit difficult.

Pre-service PE teacher learning, and their responsibilities for pupil learning and development, therefore, are not limited to the gym, and can take place in a variety of different spaces – both within the PE department and across the school. Observing and reflecting in/on all spaces within the school may be an important way to develop their learning and ensure that they can create safe spaces for pupils, something that is at the heart of trauma-informed practice (Quarmby et al., 2022; SAMHSA, 2014). Notably, this was also an issue raised by participants in the present study.

3.2.2. Safe space

Quarmby et al. (2022) identified “ensuring safety and wellbeing” (p. 448) as one of the five principles for trauma-aware pedagogies within PE – taken not only as physical safety, but also emotional safety. This means that young people should not feel that their physical safety is at risk within PE, either through injury or physical contact, including violence. Equally, they should feel emotionally secure, safe to express themselves in front of others without judgement and know that potential triggers connected to negative experiences and behaviours will be avoided. Interestingly, there was a feeling among some of the participants that the PE space is an inherently safe space for young people, and that PE teachers are often very approachable and empathetic. For example:

I think it's to do with PE, yeah definitely, because you've got more opportunity to be quite social with the kids, so they get a better relationship with you, but also a lot of the kids feel more comfortable in PE, rather than in a classroom subject. (Edie, Group 1, 4-year programme)

However, some participants also recognised that this was not the case for all pupils. Lauren (Group 1, 4-year programme) recalled a discussion with a pupil whose experiences in PE were negative, largely due to their relationship with the PE teacher.

There was another one as well where there was a pupil that came to me, I tried to talk to her about why she felt a certain way, and she ended up telling me it was because, this wasn't the word she used but, she basically said she felt neglected by the class teacher.

This is important because the teacher plays a critical role in creating an emotionally safe learning environment for their pupils, and having a positive, trusting and caring relationship is key to this (Ellison et al., 2019; Quarmby et al., 2022). Interestingly, “developing and sustaining positive relationships that foster a sense of

belonging” is another of the pedagogical principles developed by Quarmby et al. (2022, p. 449), which was also recognised by the pre-service teachers as key to creating an emotionally safe environment, a finding that is discussed in more detail in the sections below.

3.3. Learning experiences

3.3.1. Learning directly from challenging situations

As previously mentioned, we understand teacher learning as experiential and situated, where teachers learn in schools, through their practice and their reflections on this practice (Dewey, 1938). Thus, teacher learning is inherently affective and embodied (Schmidt & Allsup, 2019). This can be very positive and supportive for their learning, creating a richness of experience that is deeply personal and meaningful (Armour et al., 2017; Gray et al., 2019). However, when learning experiences are perceived as negative, then without support (e.g., resources, time, dialogue, constructive reflection), teachers can begin to lack confidence in their practice, become disillusioned with the profession or experience burnout (Hakanen et al., 2006; Gore & Bowe, 2015; Washburn et al., 2021). These issues may be even more challenging for pre-service teachers, who have additional pressures related to being new to the school, learning new skills, developing new relationships and being assessed on their teaching performance.

Many pre-service teachers find their school-based learning positive and rewarding, especially when they feel supported by school mentors and university tutors (Herold & Waring, 2018; Smith & Lev-Ari, 2005). However, despite the workshops being developed with strength-based principles in mind, the pre-service teachers in the present study often focused their discussions on learning experiences that were challenging, and at times negative, both professionally and emotionally. For example, Alice (Group 2, 1-year programme) recalled an incident where she had to respond to a disruptive pupil in her class, stating that this pupil had lost his sister to suicide. Similarly, Lana (Group 1, female, 4-year programme) described a situation she faced when a young boy began to put one of the ropes from the sports hall around his neck. To her surprise, the class teacher swiftly removed the boy from the class to talk to him about the incident. Lana found out later that this boy's mother had died by suicide. Recalling her emotions after this incident, she said that she felt “just really sad, to be honest, when I found out, just quite, like, pretty taken aback and took quite a long time to sort of, not a long time but I did definitely think about it for the next few days”. These two examples, among others, serve to highlight the stark reality for many pre-service teachers of encounters with trauma-affected youth in schools. Although not frequent nor everyday occurrences, these experiences are nonetheless significant in shaping practitioner learning.

School placements are clearly important contexts for pre-service PE teacher learning and previous research has highlighted the importance of school-based learning for working with young people who have experienced trauma (Kearns & Hart, 2017; Walsh et al., 2011). However, pre-service PE teachers require support to be able to deal with the emotional challenges they will likely face on placement; support that could come from other teachers in the school, but also from their university mentor or university counselling service. Importantly, pre-service teachers should not be left to deal with such challenges on their own (Kearns & Hart, 2017).

3.3.2. Learning with/from other teachers

Herold and Waring (2018) found that pre-service PE teachers' learning on placement invariably involved other teachers. This was the case in the present study, with the pre-service teachers we spoke to recalling several learning experiences that involved other

teachers. These included: observing other teachers, receiving feedback or advice, having formal and informal conversations and formal professional learning opportunities. For example, Kyle (Group 2, male, 1-year programme) explained the formal opportunities he had to meet up with other teachers in “deliberate practice sessions” to discuss his learning, describing how he could:

Bring things you were maybe struggling with and talk about it with other members of staff and then you would come up with a sort of pitch of how you would deal with it, so you would actually re-enact a situation ... and re-enact what you'd experienced, what was said and other teachers would act upon that, and come to a conclusion or come to a way of dealing with it, so I thought that was quite, that was very helpful.

Mostly, the interactions with other teachers were viewed as positive and supportive, especially when the more experienced teacher gave advice that aligned with the knowledge and beliefs of the pre-service teachers. For example, Alice (Group 2, 1-year programme) said:

I definitely, with my mentor and I think in the whole PE department, they are very like consistent in their expectations of students and it's ... it's consistent so, if you disciplined a student, the teacher would be like yeah that's fine, that's the right decision to make, and then we would talk about it afterwards ... I would say 'is that the right thing to do?' and they would be like, yeah 100%, you know.

However, at times, the participants' interactions with other teachers conflicted with their knowledge and beliefs about how to work with young people who may have experienced trauma. For example, Erica (Group 1, 4-year programme) recalled, and was critical of, an incident where the head of department began publicly shouting at a pupil. She said, “so I think (the pupil) threw something, and anyway the head of department kind of blew up and shouted at him immediately and then it just didn't go well, he like reacted straight away, kicking off, shouting, storming off”. In light of this, she reflected on the value of talking to the young person and asking them to explain what caused their behaviour, rather than immediately shouting at them for it. Kyle (Group 2, 1-year programme) similarly reflected on his placement experiences “that's something that's come up throughout all my placements ... the advice that I've had from mentors is [to] scream at them, shout at them, which I don't think works very well for a trainee”. Having a supportive relationship with a teacher mentor is very important for pre-service PE teacher school-based learning. That said, evidence from our workshops suggests that observing and reflecting upon the actions of teachers with different perspectives and approaches may be a useful way in which pre-service teachers can develop their critical thinking. However, given the personal and emotive nature of reflection on/in action (Hall & Gray, 2016; Schmidt & Allsup, 2019), especially in the context of working with young people who have experienced trauma, we argue that some support is necessary to ensure a positive impact on pre-service teachers' learning and wellbeing. This will also ensure that pupil wellbeing is fostered, something that we argue should be at the heart of all pre-service teacher learning.

3.3.3. Learning with/from pupils

Several authors have highlighted the relational nature of the teaching and learning process, and the importance of developing positive and trusting relationships with young people to support their learning and development (Hellison, 2011; Hemphill, 2022).

This is especially the case for those young people who may have experienced trauma (Walton-Fisette, 2020). Ellison et al. (2019), for example, suggest that PE teachers should talk to, and learn about, their pupils, expressing a sense of care and concern. This will help them to observe and identify potential triggers associated with their trauma. As previously mentioned, the importance of developing trusting relationships is reflected in the pedagogical principles developed by Quarmby et al. (2022), in particular “developing and sustaining positive relationships that foster a sense of belonging” (p. 449). It is important to note, however, that developing relationships with young people who have experienced trauma may not be easy to do (Honsinger & Brown, 2019; Quarmby et al., 2022). Some may find it difficult to trust adults – on account of previous experiences where trust has been broken – while some may not have fully developed the social and emotional skills required to form trusting relationships (Dye, 2018; Ellison & Walton-Fisette, 2022). Despite this, all of the pre-service teachers discussed the importance of developing relationships with their pupils in order to support their learning and development. For example, Lana, (Group 1, 4-year programme) said “showing the pupils that you care in a kind of ... just a simple like ‘how are you?’ as soon as they come in”. Other participants variously described talking to their pupils, listening to their pupils, being approachable and taking an interest in their pupils (e.g., their likes, dislikes or activities beyond school).

The pre-service PE teachers not only observed their pupils’ behaviours, but also their moods and their clothing using these as cues to try to learn more about them and their circumstances. For example, Hannah (Group 3, female, 1-year programme) recognised that pupils affected by trauma did not always exhibit disruptive or aggressive behaviours, but rather more introverted behaviours, which are not always easy to notice. She said:

I was thinking about in my previous [placement], you know you can quickly identify when a child is going through something, by the way they’re acting ... [different] from what they’re usually like. However, what about the child that sits up the back, introverted, that doesn’t say anything, that are so quiet?

Michael (Group 2, male, 1-year programme) made reference to observing his pupils’ PE clothing:

My first two placements were at a school with a very disadvantaged student population, and I know there were a number of students that have/are experiencing neglect. Coming in with dirty PE kit / no kit at all.

It was clear that much of the pre-service teachers’ learning about young people who have experienced trauma came from the young people themselves. As previously mentioned, this learning was supported when schools provided information about the pupils. When this information was provided, the pre-service teachers found this helpful, especially given that they did not have that much time during their placement to develop positive and trusting relationships with their pupils, as Eva (Group 1, female, 4-year programme) explained:

On my placement now, the staff know the kids so well and same as you [participant] they’ve come in or I’ve come in and they’ve alerted to me, yeah to potential challenges that could occur in the classroom which has helped massively. It’s meant that I felt like I knew the kids straight away.

Indeed, a lack of time was understood as a significant challenge

to developing relationships with pupils – with respect to pre-service PE teachers’ overall time in the school, time spent learning the other skills of teaching and the challenges of developing relationships in large classes. As such, the pre-service teachers recognised the value of working collaboratively with other teachers who could provide them with information about their pupils and help them to develop strategies to cater for their needs.

4. Conclusion

In this paper, we sought to explore the school-based learning experiences of pre-service PE teachers, specifically those experiences where they encountered young people who may have experienced trauma. To do so, guided by our understanding of teacher learning as a continuous state of becoming through their interactions with, and reflections on, their environment (experiences) (Dewey, 1938), we explored the reflective conversations of pre-service PE teachers during a trauma-aware professional development programme. Our analysis revealed several features of their placement-based experiences that contributed to the process of becoming trauma-aware; features that were identified through their observations, direct experiences, and reflections. For example, we found that understanding the context of the school influenced their learning experiences, both in terms of the geography of the school (i.e., the physical and social location) and the structure of the school (e.g., leadership and policies). The context was also significant in terms of the physical spaces that comprise the overall landscape of the school. The participants revealed that their learning is not limited to their classroom, but takes place across multiple sites throughout the school, for example, corridors, the staffroom and the changing rooms. We argue that this information is useful for teachers, including mentors and senior leaders, and for teacher educators to support pre-service PE teachers’ placement experiences, encouraging them to explore the broader context of the school, widen their observations, ask questions and, importantly, identify and understand relevant policy. Understanding, or experiencing, their learning environment in this way has the potential to contribute to pre-service PE teacher growth, and thus affect their interactions with their pupils in positive ways (Dewey, 1938). Supporting these experiences might also encourage schools and teachers to reflect on the context of their school as a site for learning, and understand those experiences that are educative, and those that are mis-educative (Dewey, 1938) for pre-service PE teachers. This should also include the ways in which other teachers in the school interact with pre-service teachers, and the impact that this relationship can have on the experience, growth and wellbeing of all teachers (Brown et al., 2022).

Indeed, the trauma-aware principles developed by Quarmby et al. (2022) may be a useful tool through which such relationships with other teachers might be facilitated. The principles can be used to engage in reflective dialogue, supporting all parties to better understand trauma, how it manifests through the behaviours of young people and to co-develop pedagogical strategies to support their learning and development in PE. Future research, therefore, might explore the ‘trauma’ learning and experiences of in-service PE teachers, seek feedback regarding the utility of the principles as a learning/reflective tool and understand how they might guide teachers’ practice. Future research might also explore with in-service teachers their experiences of working with pre-service teachers in relation to trauma-affected young people, and the ways in which they currently support their learning in this area.

Ultimately, the present study has demonstrated the significance of school-based experiences for pre-service PE teachers with regard to learning about trauma as well as pointing to the need for

professional learning environments that support all teachers in becoming trauma-aware. With research increasingly recognising the impact of childhood trauma on children and young people (World Health Organisation, 2020) and the potential role that schools can play in addressing this (UNESCO, 2019), the need for educators to be trauma-aware would seem increasingly pertinent. As such, more work is needed to ensure that teachers can be supported to become trauma-aware to ensure positive learning and development experiences in schools for all young people.

Credit statement

Gray: Conceptualisation, Methodology, Data Curation, Data analysis, Writing – Original draft preparation. Sandford: Conceptualisation, Methodology, Data Curation, Data analysis, Writing – Original draft preparation. Quarmby: Conceptualisation, Methodology, Data Curation, Data analysis, Writing – Original draft preparation. Hooper: Conceptualisation, Methodology, Data Curation, Data analysis, Writing – Original draft preparation.

Declaration of competing interest

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Data availability

The data that has been used is confidential.

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