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Introduction

The onset of Covid-19 in education and physical education teacher education

Since early 2020, the impact of Covid-19 has caused governments around the world to temporarily close educational institutions to contain the spread of the virus (UNESCO, 2021). In the Republic of Ireland, the national context of this research, early childhood facilities, and schools closed and reopened intermittently in response to the government measures used to tackle each wave of the virus since March 12th, 2020 (Department of Education, 2021a; Kennelly et al., 2020). The impact of the closures caused implications and consequences across all levels of education (Bray et al., 2020; Darmody et al., 2020). However, unlike schools and childcare facilities, some higher education institutes (HEIs), have not yet fully returned to their lecture rooms since Spring 2020.

The global physical education teacher education (PETE) community was significantly impacted by Covid-19, as all initial teacher education (ITE) programmes adapted to new theoretical and practical strategies of teaching and learning (la Velle et al., 2020; O'Brien et al., 2020). The 2019/2020 and 2020/2021 cohort of physical education (PE) student teachers faced a drastic unprecedented challenge, unique to the history of ITE with a complete move to online education. The forced transition from face-to-face learning to online learning and teaching resulted in several constraints, opportunities, and implications, which influenced the wellbeing of emerging professionals within school placement (Carrillo and Flores, 2020). This study aims to investigate the perceived implications of the Covid-19 pandemic on student teachers' practice and wellbeing. The study analyses the resources of resilience used to adapt to the online academic and professional school placement challenges associated with Covid-19 during their final 2020/2021 academic year.

The implications of Covid-19 restrictions on student wellbeing

During the Covid-19 pandemic, a period of lockdown is considered an option to stop the rapid spread of infections (Bendavid et al., 2021; Brauner et al., 2021; Haug et al., 2020; Loewenthal et al., 2020)owever, lockdowns have collateral effects on other dimensions of people's health. This approach has indirect harms that were disproportionately experienced by youth due to measures to mitigate the Covid-19 pandemic (Snape and Viner, 2020). Older students seemed to be more affected, as Liu et al. (2020) found that university students and primary school students differed in levels of anxiety and depression, with primary school students reporting milder mental health symptoms. In higher education settings around the world, female gender, increased time spent on the internet, avoidance of activities through peer pressure, precariousness, social isolation, low quality of social relations, increased concerns on academic performance, difficulty in concentrating, and disruptions to sleeping patterns increased the likelihood of negative mental health consequences (Cao, et al., 2020; Gualano et al., 2020; Son et al., 2020; Wathelet et al., 2020). The results of these studies underline the need to develop higher education wellbeing interventions and preventive strategies to promote and protect mental health (O' Brien et al., 2020c).

The perspective of wellbeing in this study

The concept of wellbeing is important to characterise in the context of our study. The current study views wellbeing as a dynamic balance that is achieved between an individual's psychological, social and physical resources and psychological, social and physical challenges (Southwick et al., 2014; Dodge et al., 2012). Wellbeing is best understood as a dynamic process where challenges exist, but resilience is strengthened through actions, resources, or skills, to adapt and cope, with the trials one faces (Southwick et al., 2014; Dodge et al., 2012; Aked et al., 2008). From a positive psychology perspective, Aked et al. (2008) indicate that there are five key actions and psychological resources around the themes of social relationships, physical activity, awareness, learning, and giving that

positively influence our wellbeing. This aligns closely with the Irish Department of Education (2021c) perspective that describes wellbeing as multi-dimensional, comprising of many interrelated indicators which include being active, responsible, connected, resilient, appreciated, respected, and aware. In summary, wellbeing in the perspective of this study, is not a destination to arrive at. It is a balance that fluctuates with our life challenges and the skills and resources we use to cope with them (Dodge et al., 2012).

Supporting student teacher wellbeing

Supporting student teachers' wellbeing is imperative at any time, but the discussion has been elevated since the onset of the Covid-19 pandemic. The education profession is already recognised as one of the highest work-related stress environments for student teachers and newly qualified teachers (Buckley et al., 2017; O' Brien et al., 2019a). Therefore, a response to these challenges is necessary for ITE programmes that focus on student wellbeing. Putting student teacher wellbeing at the centre of an ITE programme may enable newly qualified teachers to cope with the demands of the profession and foster a mutually beneficial capacity to promote the wellbeing of current and future students in the classroom and beyond (O' Brien et al., 2020c; O' Brien et al., 2019a).

As student teachers and experienced teachers of all subjects transitioned between face-to-face classroom teaching and online teaching and learning, workloads and challenges intensified and the potential for anxiety and weariness within the profession increased, possibly taking a negative toll on early professional experiences (Allen et al., 2020; Dabrowski, 2020). PETE and other ITE programmes recognise and report this as a serious concern during Covid-19 (La Velle et al., 2020; O'Brien et al., 2020; Allen et al., 2020). However, PETE programmes and student PE teachers faced a particular range of challenges and opportunities that are of critical importance as the profession continued with online learning (O'Brien et al., 2020).

Student PE teachers, during the pandemic, showed vulnerability in expressing a precarious situation and fear of losing traditional methods of teaching PE, where direct contact and relationship building was avoided and individual or digital technologies were adapted (Varea et al., 2020).

PETE programmes maintain that "fostering a sense of student community is crucial to the wellbeing of students, student teachers, and teacher educators" while moving teacher education programmes to an online mode of delivery (O'Brien et al., 2020, p. 14). A proactive approach that aims to build connections among student teachers is necessary to support them with academic and practical concerns caused by the Covid-19 disruption (Symonds, 2020; Zhai and Xue, 2020). A sense of community can be achieved by creating supportive learning environments with high levels of social presence that act as platforms to alleviate feelings of isolation and increase confidence, collaboration, and a sense of belonging (Carrillo and Flores, 2020).

The landscape for physical education teacher education during Covid-19

A recent study by O'Brien et al. (2020) examined the implications for PETE during the Covid-19 pandemic, by specifically undertaking a cross-institutional strengths, weaknesses, opportunities, and threats (SWOT) multi-case analysis on PETE programmes in Ireland, England, Finland, Greece, and Portugal. Building on Quennerstedt's (2019) observation on the necessity to reclaim the art of teaching in PE, O'Brien et al (2020) asserted that the unintended interruption to face-to-face experiences in PETE programmes during 2020 may have impacted university educators' abilities to produce well-rounded novice teachers in that subject. With the arrival of Covid-19, a large proportion of PETE programmes made an immediate transition to the virtual world of delivering pedagogical content to student teachers through the medium of online PETE. In their study of PETE programmes across five countries, O'Brien et al. (2020)

concluded that the implementation of novel methodologies to meaningfully engage student teachers through online PETE is a critically important consideration for effective PETE programme delivery. Lee et al. (2016) present a case study in which they state that educators also need to be aware in advance of the challenges that can arise in the online teaching and learning environment; however, the authors conclude that there are valuable opportunities when marrying community-based learning experiences, with effective online instruction (e.g. through innovative and creative PETE programme considerations).

Without detailed empirical research on the perspectives of student teachers during the Covid-19 pandemic, the ITE and PETE community may risk neglecting a central tenet of teacher education, i.e. the wellbeing of the student teacher. Armour et al. (2020) have recently discussed the challenge of preparing student PE teachers to understand and support youth concerning digital technologies throughout the teacher education continuum, as well as on their own identity and digital wellbeing. Digital wellbeing has been described as a multi-faceted construct concerning attitudes, behaviours, and skills that assist us to achieve a balance between digital and real-world interactions (Chambers and Sandford, 2019). The term describes the complex impact of technologies and digital services on people's mental, physical, and emotional health (Jisc, 2019). O' Brien et al. (2020) identify that with the crisis of educational disruption during the Covid-19 pandemic, an opportunity may have arisen for PETE programmes to adopt digital tools and online learning platforms to increase digital literacy, enhance pedagogical professional development and promote a sense of wellbeing and belonging among student teachers through a virtual environment. Doing so, however, requires careful consideration of good practice in using digital tools to provide students with support in both formal and informal scenarios (Jisc, 2019).

Purpose of the study

While Covid-19 continues to disrupt the day-to-day lives and educational experiences of young people globally, student teachers are burdened with unforeseen transitions and demands, as they enter their professional careers within school placement experiences. Using a SWOT analysis framework, this study seeks to critically analyse the perceived implications of the Covid-19 pandemic on student teachers' practice and wellbeing during their final 2020/2021 academic year.

Methods

This interpretive study adopted an exploratory qualitative approach (Merriam and Tisdell, 2016), through a focus-group method, with a set of voluntary student teachers. Focus group discussions were used as the medium to collect data as they provided a means to create synergic interactions from which rich data could be generated (Kreuger and Casey, 2009). This research was approved by the hosting institution's Social Research Ethics Committee (Log 2019-138). Prior to participation, a 5-minute research information presentation was provided to the student teachers on the ethical considerations and the nature of the study. Participating student teachers subsequently consented via electronic signature using Microsoft Forms™.

Context and participants

The context of this study is a PETE undergraduate programme in the Republic of Ireland, consisting of a four-year concurrent degree preparing teachers of PE and one other arts subject in English, History, Maths, Irish, or French. In the fourth year of study, the student teachers are placed in schools every morning for a full academic year to teach PE and their chosen arts subject. Prior to the Covid-19 social restrictions, they then return to the university campus three afternoons per week to take further modules in their PETE course. The

inclusion criterion for this study specified student teachers in the fourth year of the PETE programme on school placement and attending afternoon online lectures.

During the academic year, aligned to the PETE programme's value of wellbeing, all student teachers were given the option to attend a fortnightly non-formal wellbeing-focused school placement debrief online session, led by the first author. The school placement debrief online sessions offered a wellbeing-focused platform for students to voluntarily connect in relation to their placement experience. The focus groups used for data collection were embedded in one of five school placement debrief online sessions during the academic year. In keeping an elective nature, all 50 student teachers in the final year of their four-year undergraduate programme were invited to engage in the research. The participants and non-participants were notified about these debrief sessions for research purposes three weeks in advance of project commencement. The final sample of participants consisted of 24 student teachers

In accordance with the programmatic student teacher scheduling availability, participants were split into four focus group (FG) sessions (FG1 = two males and five females; FG2 = four males and three females; FG3 = two males and three females; FG4 = four males and one female), over two days towards the end of the first semester in early December. The four focus group sessions were conducted by two members of the research team, according to a repeated co-designed protocol. The focus group questions were specifically designed to capture the four elements of a SWOT (Strengths, Weaknesses, Opportunity, Threats) analysis used to investigate the perceived implications of the Covid-19 pandemic on student teachers' practice and wellbeing during their final 2020/2021 academic year.

The four questions included:

> a) What are the coping strategies or activities you are using that are assisting you in maintaining your wellbeing as a student teacher? (Strengths).

b) What are the issues or experiences that are compromising your wellbeing as a student teacher? (Weaknesses).

c) Have you been learning about what assists you to maintain your wellbeing while a student teacher? (Opportunities).

d) What are the kind of worries or stresses that you feel inhibit or hinder your wellbeing as a student teacher? (Threats).

Each session lasted between 35 and 45 minutes and was recorded in full through Microsoft Teams ™ with its automatic caption function. Each focus group session recording was then reviewed along with the automatically generated caption transcript, which was manually refined by three members of the research team, resulting in a total of four focus group verbatim transcriptions.

Data analysis

A thematic analysis (Merriam and Tisdell, 2016) was employed to organise the initial higher-order themes across all focus group transcriptions. For each of the SWOT themes, the first author undertook an inductive approach to generate the codes and sub-themes. Specifically, each focus group transcript was read for familiarisation and initial coding; then re-read to identify commonalities in the codes and sub-themes across focus groups; concluding with a coding scheme refinement and mapping of the coding for each focus group. Following this inductive approach, the SWOT themes were revisited and framed according to the overarching notion reflecting the respective set of sub-themes. Finally, the first author discussed the coding scheme with the rest of the research team to evaluate its trustworthiness, where all members achieved consensus on the strongest sub-themes with the respective codes and their segments.

Results

The outcomes of the questions adapted from the SWOT framework interview process are described in this section. Each of the SWOT themes are further broken down into sub-themes that reflect the dimensions of wellbeing identified and discussed by the participating student teachers during school placement and remote learning.

Coping strategies or activities in maintaining wellbeing as a student teacher

Three sub-themes were identified under the student teachers' protective measures and strength-based approaches to maintaining wellbeing while on school placement and attending online academic lectures during the Covid-19 restrictions. The sub-themes included: 1) Exercise, a resource of resilience; 2) The importance of connecting with others; and 3) Taking responsibility to manage stress.

Exercise – a resource of resilience

This first and most prominent sub-theme under the strengths domain encapsulates student teachers' appreciation for the role of physical activity in maintaining wellbeing. The dialogue around the impact of using physical activity as a resource to cope with the challenges and stresses of teaching and learning during the 2020/21 academic year came with a decisive attitude. Asserting that *"exercise is the biggest thing"* (in assisting them in maintaining their wellbeing), student PE teachers recognise that physical activity is a personal behaviour that they can easily implement and maintain, as it has significant positive mental health advantages. As one participant from focus group two stated: *"the onus is on ourselves to make time to exercise"*.

The importance of connecting with others

The second sub-theme identified was the student teachers' awareness of how connecting with their family, peers, and school placement teachers buffered them against the impact of stressful experiences. While discussing the role of connections in maintaining wellbeing, one student teacher from focus group four expressed: "*I need a lot of reassurance, so I talk to my parents a lot*". Both informal and formal debriefing with others in the school setting helped the student teachers feel supported in managing classroom-related issues and academic challenges. One student teacher from focus group three felt that *"a form of coping for all of us is just having a chat with our co-op teacher",* while others maintained that *"talking to others in our year… is comforting to know that others are in the same boat"* (participant from focus group two).

Taking responsibility to manage stress

The third strength-based sub-theme highlighted the student teachers' realisation that time management skills played a significant role in assisting them to manage the demands of school placement, alongside their academic workload and personal lives. For example, one student teacher from focus group one said, *"I think the more you do to stay on top of things… you have an idea about what lessons you're doing in the forthcoming week, your wellbeing is just way better because you're not as stressed".*

Being proactive, organised, and setting targets facilitated the student teachers in not only planning appropriately to cope with current classroom restrictions but also in scheduling important wellbeing strategies such as exercising, taking regular breaks, engaging in their hobbies, and regulating healthy sleep patterns.

Student teacher isolation and restricted PE delivery as potential challenges

Two prominent challenges were identified: 1) Student teacher isolation within the school environment; and 2) Restricted PE delivery.

Student teacher isolation within the school environment.

Data analysis from the focus groups strongly revealed that student teachers were experiencing consistent isolation within their respective school environments during the 2020/21 academic year. On many occasions, within the focus groups, the student teachers identified that separation from their peers and colleagues within the school environment was part of the daily cultural norm. For example, in focus group three, one participant identified that *"We have a split staff room. All of the PME's [Professional Masters in Education] sit together, so we're not really integrated properly"*. This feeling of isolation from student teachers was again echoed by another participant present in focus group three, who stated *"No, you are not really included in everything. I find I haven't met half the teachers because I don't see them"*. This feeling of student teacher disconnection from their fellow peers (e.g. university contemporaries) and colleagues (e.g. in-service teachers) in schools were primarily attributed to the existing Covid-19 in-school protocol and restrictions. One participant effectively summarised the Covid-19 school environment and atmosphere for student teachers, by mentioning that *"your whole integration into the school environment is different. It's more of a challenge. And can be very isolating for people"* (participant from focus group three).

Restricted PE delivery.

The second challenge for student teachers was related to the delivery restrictions within PE. Many student teachers expressed their discontent (and often their frustration) at having to alter their intended and prepared units of learning for PE class delivery. For example, one student teacher from focus group one specifically mentioned: *"I think it's just kind of a tough year because you can't do a lot of the kind of strategies and everything in the classroom"*. When probing the subject matter of PE further, student teachers frequently commented on having to adjust their intended PE planning, explaining that: *"There are thousands of different warm-up*

games that we can do, and pretty much 99% of them cannot be done due to Covid-19" (participant from focus group four). Given that the Covid-19 pandemic impacted the student teachers in their final year of the PETE degree, their feelings toward the restricted delivery of PE also related to their university experiences on occasions. In focus group four, another student teacher's disgruntlement was strongly felt through the triad of the Covid-19 pandemic, their in-school PE teaching, and their university experience: *"This means almost redesigning the majority of things, practical things that we have been taught since day one of the college programme".*

School placement as an occupational socialisation opportunity for resilience and professional growth

Two sub-themes were identified on school placement as an opportunity for the student teachers' wellbeing through occupational socialisation concerning: 1) Learning personal and professional skills of resilience; and 2) Enhanced teaching skills alongside qualified teachers immersed in the school setting.

Learning personal and professional skills of resilience

The strongest sub-theme reported by the student teachers was the development of personal and professional resilience skills from proactively managing their work-life balance. The student teachers signalled that school placement provides them with the learning that shows them the need for planning for balance during very busy periods. One student teacher from focus group one asserted: *"unless you kind of schedule some time for yourself, I'd say your mental health could really suffer".* The student teachers followed this insight by bringing to the fore the opportunity to learn from first-hand experience how to balance work and life, by 1) pausing for productivity *"Things that will take us away from the laptop for a while, or putting the phone away for a while, so you are more productive with your time"* (focus group

two participant); 2) planning meals for personal time; as well as 3) the importance of enough quality sleep. School placement was also an opportunity to put some aspects into perspective such as professional self-discovery on spreading their work in manageable portions, placing relative value on students' homework completion or with figuring out their professional identity. As one participant from focus group one explained; *"I don't think you can discover what type of teacher you are… in the first two placements. I think this one is where you actually kind of find your feet"*. This professional self-awareness is counterbalanced with personal self-awareness where student teachers from focus group four mention that *"You learn yourself and what you need, e.g. you need exercise or you need to be prepared for the lesson, or how to interact with different people"*. Lastly, student teachers realised the importance of being positive as a teacher and building rapport with students as an element of wellbeing *"It's good if you have that rapport, like that relationship with them [students]. It actually improves your wellbeing"* and *"since I have a good relationship with my students and stuff, they almost improve my wellbeing and improve my mood…"* (focus group one participant).

Enhanced teaching skills alongside qualified teachers immersed in the school setting

The student teachers highlighted that an opportunity arises while they experience going through this period alongside qualified teachers while on school placement. They referred to this as a critical opportunity to learn new teaching methods and skills with qualified colleagues on school placement and technology, while realising the importance of traditional teaching methods like pair-work, one-to-one discussion, and demonstrations.

> *"All the other teachers are in the same boat, so there's a lot of brainstorming going on and there are some good things coming out of it as well. You've learned to use stuff you wouldn't have normally used. We've gotten used to incorporating technology*

more. We have become better at explaining things verbally" (focus group one participant)*.*

Increased workload, isolation, and Covid-19 measures as potential threats

The student teachers described threats under four sub-themes: 1) Management of academic and school placement workload; 2) Feeling of isolation and need for peer reflection and connection; 3) Teacher self-efficacy; and 4) Responsibility for implementing Covid-19 behaviour regulations.

Management of academic and school placement workload.

The most important theme under the threats domain was academic and school placement workload leading to increased stress levels. The student teachers repeatedly mentioned that the number of assignments they had in addition to school placement was unsustainable*,* which is leading to a lack of consistency and transparency between university education and school placement practice. As one student teacher from focus group four discussed *"I find the two different entities of University and school at the same time very stressful and ... there is a lack of communication liaising between the two"*. Most students would prefer not to have school placement and university lectures three days per week, and they believed that there was valuable time lost to facets of the programme (i.e. modular assessments) they deemed unsuitable and/or timewasting, such as assignments not related to the school placement experience*.* On top of this, during school placement, the student teachers reported that their workload increased significantly due to Covid-19 restrictions that led to increased planning time necessary to adapt the PE lessons. As some of the participants from focus group four mentioned, *"Lessons' preparation takes a lot longer and it is a lot of pressure for a half-decent lesson…"*. Overall, the student teachers felt pressured to achieve the high standards set

for both academic and school placement workload, and this resulted in comments such as: *"I'm not looking forward to second term"* (focus group two participant).

A feeling of isolation and the need for peer reflection and connection

Student teachers felt they were not receiving as much guidance from the PETE programme tutors/lecturers as they felt they needed or would normally receive before Covid-19 restrictions. They claimed that: *"It is obviously hard online, but the lack of clarity from some lecturers around assignments is frustrating"* (focus group two participant). This was one of the main reason's students proposed to hold informal debrief sessions because they felt that *"A non-structured meeting, in small groups where everyone gets to actually speak, would be beneficial, so we get to the heart of what is actually going on, especially with the changing times"* (focus group one participant). The student teachers also reported a prevailing feeling of isolation and there was a need for greater peer connection and communication during school placement, a feeling that was further increased by the overwhelming nature of isolated, distance learning as expressed by another participant from focus group one:

> *"At home during the lectures, you start to overthink, it worries you more … We should have peer communication a lot more so that we can give feedback and speak to each other and see how everyone else is getting on the ground and share ideas".*

Teacher self-efficacy

Most student teachers mentioned that their teaching self-efficacy levels had decreased while on school placement during Covid-19. They related their lower self-efficacy levels to various issues, such as not having sufficient school placement experience that would enable them to teach the post-primary curriculum. One student from focus group three asserted: *"I would be nervous in case I do not teach it effectively"*. While another student from focus group three expressed similar concerns with behaviour management issues without the assistance of the

present cooperating teacher, the student teacher recalled a scenario where she said *"I did not even know where to send someone for detention…"*. In general, students felt unprepared ahead of fourth-year school placement experience and they expressed that they needed more recall lectures for material they had not covered for a long time.

Responsibility for implementing Covid-19 behaviour regulations

The last sub-theme was the responsibility of implementing Covid-19 behaviour regulations during school placement. A participant from focus group four claimed that *"PE is not Covid-19 friendly… if Covid-19 is going to be spread in school or in the class, this most probably will happen during PE"*. This constant threat further increased student teacher workload and stress, due to the implementation of Covid-19 behaviour regulations, such as hygiene measures, face mask use, and sanitisation of shared PE equipment and surfaces. One student teacher in focus group two mentioned, *"In PE, you are constantly asking yourself, did I sanitize this?"*. Furthermore, many student teachers felt that not every teacher followed Covid-19 guidelines in the respective schools, and "*As a result, other classes are more fun, because full-time teachers do not follow Covid-19 guidelines or are completely disregarding them"* (focus group three participant).

Discussion

The perspective of wellbeing in this research recognises that the concept is a dynamic balance that can be affected by adversity or life events. This balance of wellbeing, according to Dodge et al. (2012, p. 230), is the "point between an individual's resource pool and the challenges faced". In terms of ITE programmes and student teacher wellbeing, teacher professional learning efforts that target wellbeing "should strive to cultivate positive patterns of thinking and feeling" (Cook et al., 2017, p. 15). Student teachers become professional teachers, therefore, their wellbeing is essential to a profession where a reciprocated

relationship between teacher wellbeing and student wellbeing exists (O' Brien et al., 2019). To categorise and summarise the research findings, the four SWOT based themes and sub-themes explored in this research will be divided into two structured arguments: resources of resilience (strengths and opportunities) and the challenges faced (weakness and threats).

The resources of resilience used by student PE teachers

Research indicates that the things we do and the way we think can have the greatest impact on our individual wellbeing (Aked et al., 2008). Resources of resilience can be understood as the skills or physical, psychological, and social processes we harness to sustain and enhance wellbeing (Southwick et al., 2014; Dodge et al., 2012). The resources used by the student teachers reflect the five key actions described by Aked et al. (2008) recommended to protect and enhance wellbeing, which includes: strong social relationships, physical activity, awareness, learning, and giving. student teachers reported they actively use a similar range of activities to assist them to cope with the challenges of the current academic year. Particularly, the student teachers reported very consistently that physical activity, connecting with others, taking responsibility to manage stress, and learning new personal and professional skills are among the top four resources to maintain wellbeing.

In the current study, it was not surprising that physical activity was identified as the first key strategy used by student PE teachers to cope with the challenges of the 2020/2021 academic year. Student PE teachers generally study PE for their love of sport (Ralph and MacPhail, 2015), and perhaps already realise the multi-dimensional benefits of physical activity for wellbeing (Adamakis and Zounhia, 2016). Therefore, fewer barriers exist for student PE teachers to participate in physical activity. Physical activity has a significant impact on our physical, psychological, and social wellbeing (Rhodes et al., 2017) and ought to be

recognised as an important tool among all ITE programmes that aim to promote student teacher wellbeing (O' Brien et al., 2019).

The second resource of resilience, connection, as described by the participants in the study, illuminates how the impact of Covid-19 has posed an enormous challenge to ITE and PETE programmes to create a sense of connection away from both formal and informal university and school settings. Peer connection can act as a buffer against anxiety and stressful life events while attending ITE programmes (O' Brien et al., 2020). Notably, the student teachers have highlighted in this study that the school placement socialisation process can act as a protective resource for their wellbeing (Aked et al., 2008). From a professional socialisation perspective, unquestionably, the school placement is a core element of any ITE programme (Lawson et al., 2015), and is vital for the professional development of the student teachers regarding a range of important outcomes (Richards et al., 2019). Additionally, responding to the pandemic in schools alongside the in-service teachers may have served as a shared experience that nurtured the student teachers' resilience, thus leaving student teachers better prepared to deal with future adversities collectively and individually in the school context.

Student teachers reported aspects of professional learning in developing important psychological attributes of self-efficacy to cope with challenges (Martins et al., 2015; Martínez-López et al., 2010), along with cognitive and performative skills concerning pedagogy (Zach and Inglis, 2019; Darling-Hammond and Hyler, 2020). In their online discussions, they also reported the development of personal and professional skills such as managing work-life balance or relativising professional or classroom behaviour issues as a means to retain resilience during school placement. The student teachers describe themselves as active agents in the online learning process where high levels of social presence increased their confidence and sense of belonging. In terms of wellbeing and digital wellbeing, this highlights the importance of providing effective and highly social online learning experiences

characterised by interaction and collaboration, such as informal debrief sessions (Carrillo and Flores, 2020; Jisc, 2019). Kerns and Weymeher (2021) emphasise using methods in higher education that cultivate a sense of belonging and good student-professor relationships can increase student wellbeing, engagement and academic performance.

The challenges faced by student PE teachers during Covid-19

Critically reflecting on the multi-faceted evaluation in defining wellbeing (Dodge et al., 2012), the challenges faced by these student teachers were very apparent within the contextual balance of wellbeing. One of their most prominent challenges was student teacher isolation within the school environment. These consistent findings amongst the student teacher cohort are unsurprising given the plethora of recent empirical research (Bu et al., 2020; Joosten-Hagye et al., 2020; Labrague et al., 2021; Padmanabhanunni and Pretorius, 2021) documenting the international escalation of global loneliness during Covid-19. In the context of the current study, student teachers in the school environment felt separated from their peers and colleagues on a day-to-day basis. A recent cross-sectional research study exploring the social and emotional loneliness among university students (N=303) in the Central Philippines (Labrague et al., 2021) found that interventions directed toward increasing resilience, social support, and coping behaviours were effective approaches. While student teacher isolation in the school environment may be differentiated from loneliness, it seems reasonable to comment that student teachers have been disconnected from their social support structures (e.g. university contemporaries and in-service teachers) in schools during Covid-19. O'Brien et al. (2020) in their cross-institutional SWOT analysis observed that there was a general trepidation in university settings about the student teachers' experience during the implementation of lockdown measures. Given this obvious challenge to student teacher isolation in the school environment, the provision for increased opportunities for self-efficacy

and resilience (Padmanabhanunni and Pretorius, 2021) need to be prioritised on a dual basis by the university and school environments during remote learning periods.

Another challenge that gained some prominence amongst the student teacher cohort was the specific feedback concerning participants' restricted PE delivery. With the inception of Covid-19 globally in March 2020, few practitioners and scholars could have predicted the challenging impact of socially distant learning within the subject matter of PE (Beard and Konukman, 2020; Burgess and Sievertsen, 2020; Dunstan, 2020; Yu and Jee, 2021). It became very apparent in the current study that this sample of Irish student teachers became increasingly frustrated with having to alter their units of learning for PE class delivery. While these student teachers were very keen to trial new methodologies for PE during school placement, the Covid-19 public health policy documentation from the Department of Education (2021c) restricted many student teachers from trialling their preferred teaching approaches in practice. Interestingly, O'Brien et al. (2020) raised similar concerns for challenges emerging in respect to school placement issues for PETE professionals, where the minimisation of the practical modules poses a serious threat over the core PE principles. Given that the sample of participants in the current study were forced to redesign many of their face-to-face/online PE lesson plans in the existing academic year, finding novel methodologies that allow student teachers to pedagogically engage with the subject matter are needed by teacher education programmes going forward.

The main threat that most student teachers identified during the debrief sessions was the management of the academic (e.g. lectures' attendance, assignments) and school placement workload which, as expressed by the participating student teachers, significantly increased during the Covid-19 pandemic, leading to increased planning time to adapt daily lessons according to social distancing measures. The "Return to School" guidelines for PE (Department of Education, 2021b) posed further challenges to student PE teachers, as many

of these guidelines required increased time for lessons' planning and delivery. This further supports the student teacher's assertions that Covid-19 related adaptations to face-to-face PE delivery lead to an unusual excess of workload in the planning and delivery of lessons.

Another issue reported by students that may have led to the excessive workload is the existing notion that there is an increased risk of Covid-19 transmission during PE classes, compared to other subjects. The restrictions require student teachers to conduct thorough and time-consuming equipment disinfection before and after use. However, it is currently understood that the overall risk of Covid-19 transmission via contaminated surfaces is low, and generally, less than 1 in 10,000 (Harvey et al., 2021; Pitol and Julian, 2021). In addition, recent studies in gyms (Jimenez et al., 2020), soccer (Schumacher et al., 2021) and rugby (Jones et al., 2021), have shown that there are limited risks for SARS-CoV-2 infection when preventive measures are in place, suggesting a lower risk of viral transmission than previously predicted during structured physical activity and sport. These studies should inform future guidelines to attenuate the stigma created that PE class is the most likely setting where Covid-19 transmission may occur in a school.

Conclusion

In conclusion, the current sample of student teachers experienced a range of challenges that were balanced by resources of resilience, assisting them to maintain their wellbeing while teaching and learning online during Covid-19. In Ireland, during the pandemic, seven out of ten teachers reported more stress than previous years, while six out of ten reported lower levels of wellbeing (Dempsey and Burke, 2021). The recent lessons learned from Dempsey and Burke's (2021) research indicate that active supports are necessary to alleviate stress and support teachers' levels of wellbeing. Identifying the resilience resources and challenges that impact student teachers' wellbeing is essential to effectively facilitate interventions. Teaching

and adopting strategies that equip student teachers with essential life-long career coping skills and resources of resilience can support wellbeing during their time in higher education and later into their careers. Dabrowski (2020, p. 37) asserts that "face-to-face as well as online professional development approaches that aim to foster resilience and autonomy, coaching in learning communities, and emotional regulation development can also support educator wellbeing levels". In the current study, the results suggest that the debrief sessions facilitated the many recommendations outlined by Dabrowski (2020), demonstrate that wellbeing can be supported by providing student teachers with a non-formal social platform that enhances peer and university community connections. The following recommendations for ITE programmes using online platforms to reach student teachers can be derived from this research:

Student teachers:

- Maintain formal and informal connections with peer student teachers, mentors, and other teachers at school and in university, along with friends and family.

- Use techniques to manage stress and workload (e.g. physical activity, calendar planning, completing academic and teaching practice-related work ahead of deadlines).

- Take notice of the personal and professional journey.

ITE programmes:

- Facilitate meaningful time to foster community and connections with student teachers in both face-to-face and online settings. Be aware of student isolation at school and aim to promote digital wellbeing and prevent and mitigate the negative psychological impacts of stress.

- Develop, teach, and model new innovative pedagogical strategies for digital learning for all subjects.

- Instill efficacy and support student teachers to believe in their resilience to cope with challenges, change, and difficult times throughout their professional careers.

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