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Physical Educators' Efficacy in Utilising Paraprofessionals in an Inclusive Setting

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Abstract: Inclusion of students with disabilities (SwD) in Australian health and physical education (HPE) classes is on the rise. Reasonable adjustment to assist inclusive practice is often accomplished through the use of teaching assistants, or paraprofessionals. While this practice is commonly understood within the classroom, this approach remains obscure in the HPE setting. The purpose of this study was to explore how Australian HPE teachers utilise paraprofessionals when teaching SwD in inclusive environments. HPE teachers (N=14) completed an online questionnaire inquiring how paraprofessionals are being used and the strategies they are using to develop working relationships with paraprofessionals. The HPE teachers in our sample generally had a favourable attitudes towards the paraprofessionals they have worked with, however a lack of appropriate training and HPE curriculum knowledge were highlighted as deficient areas that may have an adverse effect on the overall HPE environment. Strategies to foster this collaborative working relationship were also investigated, and the primary finding dealt with adequate reciprocal communication.

Introduction

Increasing participation in physical activity is a key strategy for improving health and longevity in the Australian population. With increases in life expectancy over the last decade for individuals with disabilities, there has been a parallel increase in the incidences of cardiovascular disease, diabetes, heart disease and cancer in this population (Bigby, 2007; Fisher & Kettl, 2005; Bittles et al., 2002). Therefore it is important that the health and physical activity needs of individuals with disabilities are addressed to ensure quality of life. Physical activity and health literacy start with children's participation in health and physical education (HPE) classes. In 2005, the Disability Standards for Education created an avenue for students with disabilities (SwD) to be included within mainstream HPE classes (Department of Health and Ageing, 2006). Yet, this legislation does not ensure similar quality of experiences. Although there are numerous inputs in quality teaching experiences, teachers' efficacy levels are predictors (Guo, Piasta, Justice, & Kaderavek, 2010). Teachers' self-efficacy related to inclusivity pedagogy is one structural barrier that can impinge on successful educational experiences for SwD (Brown, Packer, & Passmore, 2013). To date, the success or otherwise of inclusivity in HPE has been relatively undocumented for Australia schools. Thus, the aim of this research was to investigate HPE teachers' self-efficacy related to inclusivity within the parameters of their use of paraprofessionals to support an inclusive and productive HPE classroom for all students.

Framing teachers' perceptions of their confidence in teaching SwD within the context of self-efficacy theory allows a greater understanding of the underpinning causes of attitudes and subsequently, behaviour. Even when individuals perceive that specific actions will likely bring about desired behaviour, they will not engage in that behaviour if they believe they do

not possess the requisite skills (Bandura, 1997). For example, teachers who have a strong sense of self-efficacy tend to use and experiment with a greater range of teaching strategies than those who have lesser efficacious beliefs about using alternative teaching pedagogies (Guskey, 1988). Teaching self-efficacy is a context specific construct, thus feelings of efficacy can change depending upon the discipline or situation (Swars, Daane, & Giesen 2006). Teachers, who are efficacious about teaching in non-integrated classrooms, are less so when faced with integrated classrooms (Hoover & Sakofs, 1995; Loreman, Sharma, & Forlin, 2013). Sources of efficacy related to teaching SwD, can be derived from initial pre-service teacher instruction, which might contain how to use resources in integrated classrooms (Jung, 2007). There is evidence that pre-service teachers reported that their undergraduate experiences do not make them efficacious about teaching SwD (Carlson, Brauen, Klein, Schroll, & Willig, 2002; Garriott, Miller, & Snyder, 2003; Gartin, Rao, McGee, & Jordan, 2001; Rojewski & Pollard, 1990). Thus, even though teachers might have a range of available support structures at their disposal to increase the quality of inclusive education, if they have low efficacy to implement these strategies it is unlikely that their pedagogy will be effective for including SwD.

A foundational underpinning for successful inclusivity in classrooms is the use of specialist teaching assistants, or paraprofessionals (Thompson & Edwards, 1994). When utilised properly these individuals can provide a beneficial support structure for inclusion (Giangreco, 2010). Nonetheless, untrained or inappropriately used paraprofessionals may lead to negative experiences (Causton-Theoharis & Malmgren, 2005), such as the promotion of learned helplessness among the SwD. Moreover, the use of paraprofessionals in the classroom can in some cases impede peer interactions (Rutherford, 2012), and social and academic growth (Giangreco & Broer, 2005). While the effect and the role of the paraprofessional in HPE settings has been studied in other countries such as the United States of America (Tews & Lupart, 2008; Causton-Theoharis & Malmgren, 2005; Horton, 2001; Stilwell, 1995; Thompson & Edwards, 1994; Vogler, French, & Bishop, 1989; Trame, 1982; Hardy, 1980), we were unable to find any paraprofessional literature specific to HPE environments emanating from Australia data. Nonetheless, these prior studies have only considered perspectives of paraprofessional support based upon SwD and their parents, neglecting the HPE teachers' perceptions. We were able to uncover one unpublished Master's thesis from the State University of New York Brockport who investigated the perceptions of HPE teachers toward their paraprofessional support (Maurer, 2004). This investigation was instrumental in helping us to design our survey for an Australian context.

Traditionally classroom teachers have been trained to rely on paraprofessionals to work with SwD to deliver individualised programs of learning. Australian HPE teachers typically have had less experience in utilising paraprofessionals because in the past SwD have not been included in HPE lessons, and adapted HPE is not a compulsory unit within their pre-service training. This lack of training and exposure may create a dissonance when HPE teachers are expected to teach in an inclusive setting. Maurer (2004) provided a glimpse of HPE teachers' perceptions reporting that they were largely unaware of how to successfully utilise paraprofessionals within their curriculum. In particular, HPE teachers thought paraprofessionals were not required in HPE classrooms because they demonstrated a lack of initiative, were incapable of assisting in this environment, and generally did not know what to do. Compounding this negative perception was the view that paraprofessionals often felt that work in the HPE classroom was beyond their remit and that the HPE class was perceived as an opportunity to 'take a break'. It is apparent that better communication between HPE teacher and paraprofessionals is warranted to establish a collaborative effort towards inclusion.

Untrained or inadequately prepared HPE teachers faced with challenges of inclusion, such as individualised attention and instruction, are likely to need the support of paraprofessionals (Hodge, Ammah, Casebolt, Lamaster, & O'Sullivan, 2004; Smith, 2004) as it appears enhanced learning outcomes for SwD occur in a 1:1 ratio or small groups (Houston-Wilson & Lieberman, 1999). Yet paraprofessionals are typically the least qualified, least respected, and the lowest paid of the teaching staff, yet they are often expected to support and provide instruction to the most challenging SwD (Giangreco & Broer, 2005). The lack of research specific to the use of paraprofessionals in the Australian context is limiting the effort to develop a culture of inclusion. Thus, this exploratory study had three aims: (1) to describe the Australian HPE teachers' perceived level of need for paraprofessionals to assist in HPE classrooms, (2) to define how Australian HPE teachers use their paraprofessionals in HPE classrooms, and (3) to document the strategies employed by Australian HPE teachers to develop positive working relationships with their paraprofessionals. The exploration of these three themes was underpinned by self-efficacy theory (Bandura, 1997) in an effort to descriptively explain the findings. Given the lack of existing data related to the Australian HPE context, we decided not to form any hypotheses and to proceed with an exploratory study that would provide a basis for further directed research. We report our descriptive findings in this paper.

Method

Participants

Primary and secondary HPE teachers from Tasmania ($N=450$) were sent an invitation email to participate in this study. The only inclusion criteria stated in this email was that the HPE teacher must have taught SwD in inclusive HPE with the assistance of paraprofessionals within the last year. A low response rate was recorded (6%) but further information indicated that there were low numbers of HPE teachers who had access to paraprofessional help. Twenty-nine respondents volunteered to participate by electronically signing a university ethics committee approved consent form. Of the 29 respondents 16 participants started the survey with only 14 ($n = 8$ female, $n = 6$ male) completing the survey.

The research sample ($N = 14$), taught in a mixture of urban and rural primary and secondary schools. Overall, participants had a mixture of teaching experience with six participants having less than 15 years of teaching experience teaching HPE, and the remainder ($n=8$) having more than 15 years' experience. The six less-experienced participants had received adapted HPE training in the form of one adapted HPE unit as undergraduates at university. The more-experienced participants had no formal training in adapted HPE during university. Only one participant indicated that her paraprofessionals had received training to assist in HPE, while the remaining 13 were either 'unsure' or stated 'no'. The one participant indicated that the school funded an after-hours workshop for the paraprofessionals, but the change in performance and outcome when supporting the HPE teacher in HPE was only 'somewhat helpful'. The sample was also asked to report on what types of student disabilities they had taught in the past year. All teachers reported having taught students with ADHD ($n = 14$) and students with autism ($n = 14$); whereas only a proportion of the teachers had taught students with speech/language impairment ($n = 12$), specific learning disability ($n = 9$), other health impairments ($n = 6$), hearing impairments ($n = 6$), visually impaired ($n = 6$), cerebral palsy ($n = 4$), multiple disabilities ($n = 4$), spina bifida ($n = 4$), Down's syndrome ($n = 3$), mental retardation ($n = 2$), traumatic brain injury ($n = 2$), and deafness ($n = 1$).

Instrument

The Paraprofessionals in HPE Settings survey (PHPE):

The survey used in the current investigation was based on an adaptation of Maurer's (2004) survey. The PHPE contained 29 items divided into four categories; teachers' sense of self-efficacy in working with paraprofessionals, the need for paraprofessionals in PE, utilisation of paraprofessionals, and strategies to develop positive working relationships with paraprofessionals. The survey was a mixture of Likert scale, frequency, rank, and open-ended questions. Modifications to items centred on redrafting of text to reflect an Australian pedagogical context.

Section 1. Teachers' sense of efficacy of paraprofessionals skills scale:

To begin we measured HPE teachers' self-efficacy for collaborating with their paraprofessionals' when teaching inclusive PE. This efficacy scale served as an underlying framework to aid in analysing the overall findings in this regard. In all, we modified 13 items from Hoy's (2000) classroom teachers' self-efficacy inventory. As the original scale was designed to measure non-specific aspects of teacher efficacy, we chose items that applied to the inclusive classroom environment with SwD present. Some items were excluded, as they did not fit the frame of the study. We changed the stem of the included items to reflect teachers' confidence levels for each teaching role associated with using paraprofessionals. Each item was modified to read, "What level of confidence are you that your paraprofessional can..." The 13 statements can viewed in table 1, as well as the overall results and the results partitioned by teacher experience. Efficacy was measured using Likert-scale choices including 5-A great deal, 4-Quite a bit, 3-Some, 2-Very little, and 1-No.

Section 2. Need for paraprofessionals in inclusive PE:

The HPE teachers' perceived need for paraprofessionals to assist during inclusive HPE was explored through three items. First, participants responded to the stem "How competent do you feel teaching SwD in PE" on a 4 point Likert-scale (1-Very competent, 2-Competent, 3-Unsure, or 4-Not competent). Participants then responded to the stem "How satisfied are you with the level of support you receive from paraprofessionals in inclusive PE" (1-Very satisfied, 2-Satisfied, 3-Somewhat satisfied, 4-Not very satisfied, or 5-Unsatisfied). Finally, participants were asked to elaborate on these responses in an open-ended section.

Section 3. Utilisation of paraprofessionals in PE:

In this section, participants reported on their perceptions of their paraprofessionals capabilities. In particular, how they perform regarding nine typically assigned PE-related tasks during inclusive PE. Each item began with the stem, "The paraprofessionals I have worked with are capable of..." to which nine tasks were listed, including: (1) carrying out lessons or tasks set by the HPE teacher, (2) providing one-on-one HPE instruction for a SwD, (3) modifying curriculum choices and adapting equipment under the guidance of the HPE teacher, (4) setting up materials and equipment for HPE activities, (5) physically assisting SwD to move through an activity, (6) assisting in behaviour management for SwD, (7) administering assessments adapted specifically for SwD, (8) planning learning activities for SwD, and (9) recruiting students without disabilities to peer model for SwD. Participants responded to each using a 5 point Likert scale (1-Always, 2-Often, 3-Rarely, 4-Never, or 5-not applicable). Participants were then asked to rank each of these nine items for importance as to what paraprofessionals should be capable of completing in their inclusive HPE setting. A ranking of one represented the most important task while a ranking of nine indicated the acknowledgment that the task was least important. Finally, HPE teachers were allowed to

indicate anything else they would like paraprofessionals to do in HPE to support SwD and/or the HPE teacher. This section allowed for the identification of how HPE teachers viewed paraprofessional tasks, and thus how they most wanted the paraprofessionals to assist during inclusive PE.

Section 4. Strategies to develop positive working relationships with paraprofessionals:

This final section of the survey was included to allow the teachers an opportunity to share their views on how to develop positive working relationships between the teacher and the paraprofessionals. Participants were first asked who they thought was responsible for training paraprofessionals about their responsibilities' as an assistant in the inclusive HPE setting, either the HPE teacher, paraprofessional, special education teacher, or the paraprofessional should not be trained in a HPE context. This was followed by an open-ended question to allow the participants to elaborate on the choice of strategies they have used to improve inclusive HPE delivery. Finally, participants were asked if the paraprofessionals had taught the HPE teacher anything about teaching SwD through reciprocal communication. This entire electronic survey took an average of 16 minutes (+/- 2.2 minutes) to complete.

Design

As the aim of this study was to explore HPE teachers' self-efficacy towards using paraprofessionals within the context of HPE classroom, we chose to use a mixed method approach (Tashakkori & Teddlie, 2003). In the first section of the study, we used several efficacy items to assess the various aspects related to teaching SwD in the HPE context. These data were gathered as a level of efficacy not a source of those beliefs. Moreover, the efficacy items were not hierarchical but global in nature. For the qualitative data, given the exploratory nature of this study we used an a typological analytical approach (Lincoln & Guba, 1985) because we drew upon literature to guide the development of questions and categories for sorting the data. Notwithstanding as researchers in the area, we were aware of other quantitative and qualitative outcomes associated with the research area, so there was a degree of inductive-generating subjective processing in the formation of emergent themes.

Data analysis

A Cronbach's alpha coefficient was used to assess the reliability of the first section of the survey, the modified version of Hoy's (2000) classroom teachers' self-efficacy inventory. These 13 items yielded high reliability ($\alpha = 0.82$) for the modified version of this survey used in the current investigation. Considering the exploratory nature of this research study, several forms of descriptive statistics were used to capture the meaningfulness of the numerical data. These included means and standard deviations for the Likert-scale responses, number (n) of participants who selected a particular response, frequency (f) counts of tallied responses, and ordinal group data reported as the top three and bottom three responses. The latter technique enabled most common and least common responses to be explored and highlighted as areas for discussion. Quantitative data were also reported as a function of teaching experience where applicable. All quantitative data were calculated using SPSS Version 21 software.

Data were analysed using the NUD*IST software program (Richards, Richards, McGalliard, & Sharrock, 1992). Using this program to store, manage and analyse data enabled the researchers to realise the exploratory and explanatory purposes of the study. Important concepts that emerged from the data were labeled, categorised, and coded (Patton, 2002). The transcripts were independently read and re-read by the three researchers and ideas

about evidence to support each of the main categories noted (Burnard, 1991). Once the researchers had completed initial coding the research team met where codes were compared and disagreements were discussed.

Results and Discussion

Section 1: Efficacy

Overall using this portion of the PHPE, physical educators reported low efficacy levels ($M = 2.98$, $SD = 0.63$) for paraprofessionals to complete the 13 tasks associated with teaching inclusive HPE with the assistance of paraprofessionals. A review of individual items associated with various tasks indicated that for some tasks and roles the participants reported having moderate levels of efficacy related to paraprofessionals' skills (Table 1). Participants reported highest confidence in paraprofessionals' skills in being able to make HPE a safe place ($M = 3.88$, $SD = 0.34$), making HPE enjoyable ($M = 3.68$, $SD = 0.48$), and being able to control disruptive behaviour ($M = 3.56$, $SD = 0.63$). Nonetheless, the lowest levels of confidence for paraprofessional assistance were reported for connecting with students ($M = 2.11$, $SD = 0.62$), promoting learning ($M = 2.35$, $SD = 0.72$), and motivating students ($M = 2.68$, $SD = 0.70$). This order of importance was the same for the more-experienced HPE teachers; however the less-experienced HPE teachers had a slightly different order at the top and bottom of the scale. These teachers placed keeping students on task ($M = 3.33$, $SD = 0.82$) as a more important task than controlling student behaviour. On the other end they thought expressing their views ($M = 2.50$, $SD = 0.55$) was not as important as motivating students. Perhaps the adapted HPE training they received at university prepared them more to control classroom behaviour and they did not think this was the responsibility of the paraprofessionals. Moreover, their training may not have prepared them to consider the paraprofessionals as a viable source of input to improve service delivery. Considering the lack of data from Australian teaching or from physical educator perspectives, comparative analyses are speculative at best. Perhaps these results can serve as starting points of discussion to be addressed in the future by Australian inclusivity or adapted HPE units within pre-service teacher training programs. Increasing HPE teacher self-efficacy in this capacity could result in successful utilisation of paraprofessionals as teacher tools, which has been shown to improve service delivery (Houston-Wilson & Lieberman, 1999). This might allow HPE teachers to spend more time on whole class instructional strategies, while appropriately utilised paraprofessionals could provide reasonable individualised support to SwD during the lessons.

Section 2: Need

In terms of participants' feelings of competency only 37.5 per cent of the more-experienced teachers reported feeling 'competent' about teaching HPE to SwD, compared to 70 per cent of the less-experienced participants (no one in our sample scored 'very competent' for this item). Notwithstanding, it stands to reason that university training in this area of specialty should increase competence, as well as attitudes towards teaching HPE to SwD (Folsom-Meek, Nearing, & Kalakian, 2000). This trend of having low to moderate levels of competency associated with teaching SwD in HPE was also reflected in the open-ended data. Several of the more-experienced participants expressed the need for paraprofessionals during inclusive HPE to which they attributed to a lack of their own

adapted HPE training. One more-experienced physical educator wrote, “I have had no training in adapted HPE, so I rely a lot on the paraprofessionals. I regularly ask the paraprofessionals about behaviour management techniques that worked well with specific SwD.” Thus for our sample, even though they were paid professionals, there was a collective sense of low competency for being able to deliver a satisfactory inclusive learning experience in HPE, without the aid of paraprofessionals. This tension is not surprising considering the recent changes to school enrolments, and the lack of professional development offered to Australian HPE teachers in inclusivity pedagogical strategies.

In terms of participants’ sense of satisfaction with the paraprofessional support when teaching SwD in HPE, the majority of HPE teachers either reported being ‘satisfied’ ($n = 7$) or ‘very satisfied’ ($n = 5$). This is understandable given the previous findings related to competency. Although, if HPE teachers express low competency levels associated with teaching SwD in HPE, the question could be raised as to their competency to judge the work of paraprofessionals. Participants frequently described the sense of commitment evident in paraprofessionals work with SwD in HPE settings. This commitment was directed at ensuring that SwD had an enriching learning experience. Moreover, it seemed that without the paraprofessionals, participants perceived that SwD learning experiences would be of lesser quality. One more-experienced physical educator noted:

As I can only give a limited amount of personalised time to each student in the class, in any one lesson, SwD would not be able to get the most out of the lesson. These students require extra and repeated instructions to be able to complete tasks. The SwD would feel more comfortable and secure with their aid and more likely to become more involved. These are all skills that the paraprofessionals that I have worked with have demonstrated. They have always been supportive of my program and helpful in carrying it out.

Another less-experienced physical educator from an urban school wrote, “By having support available during the lesson the SwD are gaining the best possible outcome from an activity that is not necessarily planned or suitable for their level of ability.” Thus, for participants who feel a lack of competency associated with SwD in a HPE context, the paraprofessionals provide much needed support to ensure a quality learning experience. Nonetheless, participants indicated a level of ambivalence towards the inclusion of SwD into the HPE curriculum. The challenges faced by HPE teachers when teaching inclusive HPE are well documented (e.g., Obrusnikova & Dillon, 2011). The theme of ambivalence present in our study was related to the impact of SwD on the learning experiences of general HPE students. In some respect, the attitude reflected behaviour of integration of SwD, but not inclusion. In this sense, it appears that for some HPE teachers, the SwD had to fit into the existing curriculum without modification. Participants indicated that they had not adopted curricula content that would allow SwD participate regardless of the presence of paraprofessionals. Thus, if paraprofessionals were not present, participants indicated that they would exclude the SwD in favour of ensuring a quality learning experience for the general students. A less-experienced physical educator wrote:

Without the paraprofessional in attendance general students would be adversely affected in a group situation, no matter how patient and kind they are. Without a paraprofessional present, someone must miss out on teacher time, the child with the disability or the class.

Similar sentiments were expressed by an urban-based, more-experienced physical educator who noted:

The presence of the paraprofessional provides a constant for the student. Due to noise, tantrums, frustrations, defiance or whatever, behaviours are exhibited by the student at the time, the paraprofessional needs to remove him/her to benefit the learning opportunities of the class and to optimise safety for all.

Negative attitudes and behaviours towards SwD occur for many reasons, but SwD might internalise these negative attitudes if they experience being excluded because the paraprofessional is not present during their HPE class, or that their presence is a 'burden' on the rest of the students. Such internalisation might negatively affect their behaviour, social relationships, education, and health. Understanding the presence of negative attitudes held by HPE teachers might be evident in the previous result of a lack of competency for teaching SwD. That is, HPE teachers might feel overwhelmed by having to include SwD into their classroom and do not have a full understanding of the appropriate pedagogical techniques to ensure quality of learning. This rationale has support with some participants indicating that paraprofessionals needed to upgrade their knowledge about creating and developing learning opportunities for SwD within the realm of the HPE setting. A more-experienced physical educator wrote, "The paraprofessionals that we have are excellent in every way but there is always room for more support and guidance/funding to making learning opportunities even more valuable for SwD and learning difficulties." Thus, rather than the HPE teacher seeking out professional learning so as to develop a better learning environment for SwD in PE, the participant HPE teachers placed the onus onto the paraprofessional. Moreover, it is important to recognise that when working with SwD there is a politically correct way to answer questions, such as the ones in this survey, which may differ from one's true feelings. It is evident in these responses that the participants did not want to risk losing the help they currently receive from paraprofessionals. But there was also a consistent undertone in the responses that this assistance could be better, perhaps with training or professional development for the paraprofessionals more specific to the HPE curriculum.

Section 3: Use

Participants were asked to indicate how often their paraprofessionals completed nine separate tasks that paraprofessionals might typically perform in an inclusive HPE setting. Furthermore, they were asked to rank these tasks based on their importance within the curriculum. For the most part, participants were agreeable ('often' was the most frequent response) with the regularity in which their paraprofessionals completed these PE-related tasks. Nonetheless, tasks such as setting up materials and equipment ($f=8$), administering tests ($f=12$), and planning learning activities ($f=13$) were the three tasks that received negative responses of 'rarely' and 'never'. Perhaps if paraprofessionals received training in HPE during their professional development they could better contribute to these areas and foster a more inclusive HPE environment for SwD (Hardy, 1980).

In terms of ranking the importance of these tasks the ability to use guidelines set by the HPE teacher was the highest ranked role ($n=7$), for physically assisting SwD ($n=4$), and providing 1:1 instruction ($n=4$). These rank orderings were further described as a function of years of teaching experience. The more-experienced HPE teachers expressed that having paraprofessionals follow guidelines they set was the most important, while the less-experienced teachers noted that providing 1:1 instruction to the SwD was of most value. The

bottom three ranked tasks reported by the sample were planning learning activities ($n = 12$), administering tests ($n = 10$), and setting up materials and equipment ($n = 9$). These lower three rankings were reported the same regardless of teaching experience. Taken collectively these data indicate that the HPE teachers recognise that the paraprofessionals, who are not trained in HPE, do not have much to contribute in ways of HPE-specific responsibilities. They are more likely to use these individuals as an 'extra set of hands' to perform tasks that are more closely related to those of a care-taker, rather than those of an educator. This is concerning, because it may demonstrate to the SwD that HPE is not an important aspect of the academic curriculum, instead it is just a related service provided to students with a focus more on those that are athletically inclined. It is important for SwD to understand that all individuals should participate in physical activity because this can lead to a healthier lifestyle, which would especially benefit those with a developmental disability. This message needs to be articulated by every peer in the inclusive HPE classroom, including the paraprofessionals.

Examples of proper communication were identified in the open-ended responses of this section where participants identified other roles that paraprofessionals fulfill in HPE settings. HPE teachers frequently commented that paraprofessionals helped SwD integrate with the general students. A more-experienced physical educationalist wrote:

The paraprofessionals assist SwD to combine well with general class students especially in group activities. Paraprofessionals lead SwD through daily HPE activities or provide the child with an alternative activity. For example, paraprofessionals will continue with daily bike riding skills, first taught by the HPE teacher.... then passed onto the paraprofessionals to continue once skills were established.

In this case, the communication of responsibility between HPE teacher and paraprofessional was an effective strategy for aiding in the skill development of the SwD. This demonstrates the proper use of paraprofessionals as an educational assistant to successfully implement inclusive HPE.

Section 4: Strategies

Within the final section of the survey participants presented a variety of different strategies used to develop working relationships with their paraprofessionals. These strategies centered on increasing paraprofessionals' knowledge about collaborative teaching in HPE and how to provide support in HPE classrooms. Some expressed a desire for individualised or school-based training for paraprofessionals specific to HPE. For example, one more-experienced participant wrote:

There should probably be some general training but everyone works slightly differently and students' needs vary so the teacher and the paraprofessional need to work together to decide how best to operate for the success of the students. I believe it comes down to our 'Advanced Skills Teacher' or 'Assistant Principal' in arranging professional learning time to train in this area.

Alternatively, others felt that the HPE teacher should be responsible for this training. This is an interesting theme, as stated earlier, the majority of participants felt they were not competent to teach SwD. One more-experienced participant noted:

I personally feel I train the paraprofessionals to do what I think is the right thing to do, however I think I just use a common sense approach, which may

not necessarily be right. With appropriate HPE teacher training it is probably their job to help the aide to teach in the way they want, however a professional body to do the job would be best.

A lack of an identified training process for paraprofessionals and HPE teachers for teaching SwD was evident. This lack of a training process suggests that teacher registration boards or perhaps professional organisations need to give more direction to teacher training programs and schools about inclusive HPE pedagogy strategies. Teacher workshops in this area could be provided by university programs to ensure that HPE teachers and their paraprofessionals are receiving the most current best practice, evidence-based teaching strategies to make for the most successful inclusive HPE classrooms. Moreover, school administration and principals need to recognise this area of development as important and provide adequate training time and relief support to make this type of collaborative venture accessible.

Working with paraprofessionals to successfully include SwD in HPE must be a collaborative effort. When asked if their paraprofessionals had taught the physical educators anything about teaching SwD, 11 out of 14 participants indicated 'yes'. In terms of what was taught, participants wrote about learning appropriate behaviour management strategies for SwD, ways of connecting and communicating with SwD, as well as individual characteristics of certain disabilities. One participant noted:

One of our paraprofessionals has worked with the same boy since kindergarten (now in grade 11) so she knows his cues and medical needs better than just about anyone and has excellent advice for ways to try things and go about activities such as the verbal and non-verbal cues that can be used, particularly those on the autism spectrum.

This last piece evidence indicates that a successful working relationship will not only benefit the paraprofessional and the HPE teacher, but most importantly the SwD. For example, in terms behaviour management the most successful strategy is a consistent one that can be applied throughout the course of the school day. Since the paraprofessionals are typically with the SwD throughout the day, they can effectively communicate the behaviour management plan to the HPE teacher. This would allow for a working relationship to blossom; and ultimately compel the HPE teacher to respect the paraprofessional as an integral part of the service delivery model for SwD.

Conclusion

In this exploratory study it was our aim to provide a snapshot of how Australian HPE teachers describe their working relationships with paraprofessionals when teaching. It should be noted that the interpretation of these data should be done with caution as our sample size was limited. This was reflected by our low response rate which may have been attributed to negligence of this area of inquiry on the part of the population, or perhaps do to a lack of support in terms of having paraprofessionals in some school districts. Regardless of their level of teaching experience or university training, none of the HPE teachers in our sample felt very competent in teaching HPE to SwD. Thus, there was a strong theme of needing paraprofessionals for HPE settings when SwD were present. This theme is not reflected of Maurer (2004), who noted that American HPE teachers believed paraprofessionals were not required in general HPE because they demonstrated a lack of initiative, were incapable of assisting, and did not know what to do. Our sample, while supportive of the use of

paraprofessionals in PE, showed an ambivalent attitude towards inclusion, with an attitude that paraprofessionals needed more professional development to improve the quality of the learning experience for SwD.

Evident in our study, is a lack of confidence in HPE teachers to deliver quality learning experiences to SwD in a HPE setting. Moreover, it seems that there is a heavy reliance on paraprofessionals to do the heavy lifting in terms of teaching SwD in HPE. A major concern for paraprofessionals about their role in HPE has been their lack of training and knowledge of the HPE curriculum (Horton, 2001). Thus, planning learning activities and administering tests appropriate to curriculum standards and SwD' ability have been identified as posing problems for paraprofessionals, and the current participants have confirmed this need.

Paraprofessionals appear to be doing well supporting SwD in Australian inclusive HPE settings considering their lack of appropriate training and curriculum knowledge, and the HPE teachers in our sample believe they are utilising them well. Paraprofessionals provide a level of support that is generally to the satisfaction of HPE teachers in charge of the class. Nonetheless, HPE teachers' consistently provided many areas for improvement in paraprofessionals' skills and knowledge. Physical educators too can do more to better utilise the needed resources of paraprofessionals when teaching SwD in HPE classrooms. This fundamentally comes down to communication with the paraprofessional about the SwD, assigning specific tasks for the paraprofessional to complete with the SwD throughout the lesson or unit, and specific training on how to better utilise the paraprofessionals in HPE.

Additionally, HPE teachers need to work on strategies to improve their professional relationships with paraprofessionals to better the HPE experience for SwD. Future implications of this research could be the development of appropriate training courses for paraprofessionals highlighting the specific target areas of assessment in HPE and developing appropriate learning activities for the SwD in HPE. Training may include ways to more successfully communicate with HPE teachers regarding SwD needs, the problems and pitfalls associated with learned helplessness and dependence on the paraprofessional (Goodwin, 2001), how to facilitate SwD interaction with their peers to help them foster social situations (Causton-Theoharis & Malmgren, 2005), to help SwD avoid social isolation by facilitating peer interaction time (Tews & Lupart, 2008), and to enhance their level of understanding of HPE content and requisite physical abilities that SwD might encounter throughout a specific lesson. HPE teachers and paraprofessionals alike need to take on more responsibility when it comes to providing SwD HPE development, something that could greatly improve the quality of life of SwD. Because as SwD get older, self-reliance and increased levels of self-dependence should be a tenable goal that can be fostered through HPE development (Natterlund, Gunnarsson, & Ahlstrom, 2000).

The vast majority of literature pertaining to paraprofessionals in HPE is presented from an American viewpoint, where education of SwD is somewhat different to education of SwD in Australia. United States legislation employs a 'least restrictive environment' policy, in which SwD are placed in inclusive HPE on a continuum, depending on the severity of their disability (Block & Krebs, 2011). Australia's HPE for SwD is somewhat dichotomous; it is either segregated, or inclusive and the severity of the child's disability and degree of social maladjustment have both been identified as important factors in determining the segregated or inclusive placement of individuals (Thomas & Loxley, 2001). Hence, with limited Australian literature on paraprofessionals to use as a foundation for the study and no definitive national curriculum model or policy that facilitates inclusion the need for expansion in this area of research inquiry is imperative to facilitate successful inclusion practices in HPE in our nation.

References

- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: Freeman.
- Block, M., E. & Krebs, P. L. (2011). An alternative to least restrictive environments: A continuum of support to regular physical education. *Adapted Physical Activity Quarterly*, 9(2), 97-113.
- Bigby, C. (2007). Aging with an intellectual disability. In, I. Brown & M. Percy (Eds.), *A comprehensive guide to intellectual and developmental disabilities* (pp. 607–615). Baltimore, MD: Paul H. Brookes Publishing Company.
- Bittles, A.H., Pettersen, B.A., Sullivan, S.G., Hussain, R., Glasson, E.J., & Montgomery, P.D. (2002). The influence of disability on life expectancy. *Journal of Gerontology: Medical Sciences*, 57(7), M470-472.
- Brown, C. M., Packer, T. L., & Passmore, A. (2013). Adequacy of the regular early education classroom environment for students with visual impairment. *Journal of Special Education*, 46(4), 223–232.
- Burnard, P. (1991). A method of analysing interview transcripts in qualitative research. *Nurse Education Today*, 11(6), 461-466. [http://dx.doi.org/10.1016/0260-6917\(91\)90009-Y](http://dx.doi.org/10.1016/0260-6917(91)90009-Y)
- Carlson, E., Brauen, M., Klein, S., Schroll, K., & Willig, S. W. (2002). *Study of personnel needs in special education: Key findings*. Washington, DC: U.S. Department of Education.
- Causton-Theoharis, J. N. & Malmgren, K. W. (2005). Increasing peer interaction for students with severe disabilities via paraprofessional training. *Exceptional Children*, 71(4), 431-444.
- Department of Health and Aging. (2006). *A review of the research to identify the most effective models of practice in early intervention for children with autism spectrum disorders*. Canberra, ACT: Australian Government.
- Fisher, K., & Kettl, P. (2005). Aging with mental retardation: Increasing population of older adults with MR require health interventions and prevention strategies. *Geriatrics*, 60(4), 26–29.
- Folsom-Meek, S.L., Nearing, R.J., & Kalakian, L.H. (2000). Effects of an adapted physical education course in changing attitudes. *Clinical Kinesiology*, 54(3), 52-58.
- Garriott, P., Miller, M., & Snyder, L. (2003). Preservice teachers' beliefs about inclusion education: What should teacher educators know? *Action Teacher Education*, 25(1), 48-53. <http://dx.doi.org/10.1080/01626620.2003.10463292>
- Gartin, B. C., Rao, S., McGee, C., & Jordan, E. (2001). Perception of pre-service teachers about inclusion. *Catalyst for Change*, 30(1), 23-25.
- Giangreco, M. F. (2010). One-to-one paraprofessionals for students with disabilities in inclusive classrooms: Is conventional wisdom wrong? *Intellectual and Developmental Disabilities*, 48(1), 1–13.
- Giangreco, M. F. & Broer, S. M. (2005). Questionable utilization of paraprofessionals in inclusive schools: Are we addressing symptoms or causes? *Focus on Autism and Other Developmental Disabilities*, 20(1), 10-26. <http://dx.doi.org/10.1177/10883576050200010201>
- Goodwin, D. L. (2001). The meaning of help in PE: Perceptions of students with physical disabilities. *Adapted Physical Activity Quarterly*, 18, 289-303.
- Guo, Y., Piasta, S. B., Justice, L. M., & Kadervek, J. N. (2010). Relations among preschool teachers' self-efficacy, classroom quality, and children's language and literacy gains. *Teaching and Teacher Education*, 26, 1094-1103. <http://dx.doi.org/10.1016/j.tate.2009.11.005>

- Guskey, T.R., (1988). Teacher efficacy, self-concept, and attitudes toward the implementation of instructional innovation. *Teaching and Teacher Education*, 4, 63-69. [http://dx.doi.org/10.1016/0742-051X\(88\)90025-X](http://dx.doi.org/10.1016/0742-051X(88)90025-X)
- Hardy, R. (1980). Paraprofessionals in physical education: Guidelines and performance responsibilities. *The Physical Educator*, 8, 97-98.
- Hodge, S. R., Ammah, J. A., Casebolt, K., Lamaster, K., & O'Sullivan, M. (2004). High school general physical education teachers' behaviors and beliefs associated with inclusion. *Sport, Education & Society*, 9(3), 395-419. <http://dx.doi.org/10.1080/13573320412331302458>
- Hoover, J. J. & Sakofs, M .S. (1995). Relationships between sources of anxiety of elementary student teachers and attitudes towards mainstreaming. *Journal of Research and Development in Education*, 19(1), 49-55.
- Horton, M. L. (2001). Utilizing paraprofessionals in the general physical education setting. *Teaching Elementary Physical Education*, 1, 22-25.
- Hoy, W. (2000). Bandura's instrument: Teacher self-efficacy scale. Retrieved from people.ehe.ohio-state.edu/ahoy/files/2009/02/bandura-instr.pdf
- Houston-Wilson, C. & Lieberman, L. J. (1999). The individualized education program in physical education. *Journal of Physical Education, Recreation, & Dance*, 70(3), 60-64. <http://dx.doi.org/10.1080/07303084.1999.10605898>
- Jung, S. W. (2007). Preservice teacher training for successful inclusion. *Education*, 128(1), 106-113.
- Lincoln, Y. & Guba, E. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.
- Loreman, T., Sharma, U., & Forlin, C. (2013). Do pre-service teachers feel ready to teach in inclusive classrooms? A four country study of teaching self-efficacy. *Australian Journal of Teacher Education*. 38(1), 27- 44. <http://dx.doi.org/10.14221/ajte.2013v38n1.10>
- Maurer, K. R. (2004). *The use of paraprofessionals in general physical education: Perceptions of status, attitude, need and training*. Unpublished master's dissertation. State University of New York College, Brockport, NY.
- Nätterlund, B., Gunnarsson, L., & Ahlström, G. (2000). Disability, coping and quality of life in individuals with muscular dystrophy: A prospective study over five years. *Disability & Rehabilitation*, 22(17), 776-785. <http://dx.doi.org/10.1080/09638280050200278>
- Obrusnikova, I. & Dillon, S. R. (2011). Challenging situations when teaching children with autism spectrum disorders in general physical education. *Adapted Physical Activity Quarterly*, 28, 113-131.
- Patton, M. Q. (2002). *Qualitative research & evaluation method* (3rd ed.). Thousand Oaks, CA: Sage.
- Richards, T., Richards, L., McGalliard, J., & Sharrock, B. (1992). *Nudist 2.3 User Manual*. PL Victoria, Australia: Replee.
- Rojewski, J. W. & Pollard, R. R. (1990). A multivariate analysis of perceptions held by secondary academic teachers toward students with special needs. *Teacher Education and Special Education*, 16, 300-341.
- Rutherford, G. (2012). In, out or somewhere in between? Disabled students' and teacher aides' experiences of school. *International Journal of Inclusive Education*, 16(8), 757-774. <http://dx.doi.org/10.1080/13603116.2010.509818>
- Smith, A. (2004). The inclusion of pupils with special educational needs in secondary school physical education. *Physical Education and Sport Pedagogy*, 9(1), 37-54. <http://dx.doi.org/10.1080/1740898042000208115>

- Stillwell, J. (1995). The paraprofessionals in the physical education program. *Teaching Elementary Physical Education*, 6(1), 11-12.
- Swars, S. L., Daane, C. J., & Giesen, J. (2006). Mathematics anxiety and mathematics teacher efficacy: What is the relationship in elementary preservice teachers? *School Science and Mathematics*, 106(7), 306-315. <http://dx.doi.org/10.1111/j.1949-8594.2006.tb17921.x>
- Tashakkori, A. & Teddlie, C. (Eds.). (2003). *Handbook of Mixed Methods in Social & Behavioral Research*. Thousand Oaks, CA: Sage.
- Tews, L. D. & Lupart, J. (2008). Students with disabilities' perspectives of the role and impact of paraprofessionals in inclusive education settings. *Journal of Policy and Practice in Intellectual Disabilities*, 5(1), 39-46. <http://dx.doi.org/10.1111/j.1741-1130.2007.00138.x>
- Thomas, G. & Loxley, A. (2001). *Deconstructing special education and constructing inclusion*. Buckingham, UK: Open University Press.
- Thompson, M.M. & Edwards, R.C. (1994). Using paraprofessionals effectively in physical education. *Teaching Elementary Physical Education*, 5(2), 16-17.
- Trame, E.A. (1982). Conform or transform? Paraprofessionals in physical education. *Journal of Physical Education, Recreation & Dance*, 53(9), 62-63. <http://dx.doi.org/10.1080/07303084.1982.10629472>
- Vogler, E.W. French, R. & Bishop, P. (1989). Paraprofessionals: Implications for adapted physical education. *Physical Educator*, 46(2), 69-76.

Table 1: Teachers’ sense of efficacy associated with paraprofessionals assisting in teaching HPE to SwD. Each item was prefaced with the stem, “What level of confidence are you that your paraprofessional can...” Statements are listed hierarchically based on the overall sample’s five point Likert scale values presented as means (standard deviations).

Statement ending	Overall	Teaching Experience	
	(N=14)	<15 years (n = 6)	>15 years (n = 8)
Make HPE safe	3.88 (0.34)	3.67 (0.52)	4.00 (0.00)
Make students enjoy PE	3.68 (0.48)	3.50 (0.55)	3.80 (0.42)
Control behaviour	3.56 (0.63)	3.16 (0.75)	3.80 (0.42)
Help students trust teachers	3.50 (0.73)	3.16 (0.75)	3.70 (0.68)
Help children follow rules	3.43 (0.51)	3.16 (0.41)	3.60 (0.52)
Keep students on task	3.37 (0.72)	3.33 (0.82)	3.40 (0.70)
Help students to work together	3.28 (0.60)	3.33 (0.52)	3.26 (0.68)
Prevent behaviour issues	3.00 (0.89)	2.83 (0.98)	3.10 (0.88)
Help children complete tasks	2.87 (0.72)	2.67 (0.82)	3.00 (0.68)
Express views	2.71 (0.60)	2.50 (0.55)	2.80 (0.63)
Motivate students	2.68 (0.70)	2.83 (0.75)	2.60 (0.70)
Promote learning	2.35 (0.72)	2.50 (0.55)	2.30 (0.82)
Connect with students	2.11 (0.62)	2.50 (0.55)	1.90 (0.57)