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DISABILITY SPORT SIMULATIONS IN ADAPTED PHYSICAL ACTIVITY: EXPERIENCES OF PARTICIPANTS

SIMULACIJE V ŠPORTIH ZA INVALIDE PRI PRILAGOJENI TELESNI VADBI: IZKUŠNJE SODELUJOČIH

Abstract

Simulation is used for awareness activities and for learning disability sport in adapted physical activity courses. The impact of participation in simulations is explored using qualitative inquiry involving 79 post-secondary students: 54 women and 25 men (ages 19 to 41). Content analysis of the questionnaire responses indicated that the impact of the simulation was reflected in three conceptual categories: (a) purpose; (b) feelings; and (c) learning. The themes that emerged were: for purpose (a) feeling what it is like to have a disability, and (b) participating in disability sport; for feelings (a) enjoyment of sport, (b) challenges, and (c) vulnerability; and, for learning, (a) what students valued, and (b) first-hand experience with the challenges that individuals with disabilities face every day. Students demonstrated some misunderstandings and risks despite overall positive responses to the experience.

Key words: simulation, teaching, adapted physical activity

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Izvleček

Simulacije se uporabljajo v aktivnostih zavedanja in pri učenju športa za invalide v okviru učnih ur prilagojene telesne vadbe. Vpliv sodelovanja v simulacijah smo ugotavljali s pomočjo kvalitativne raziskave, v kateri je sodelovalo 79 študentov: 54 žensk in 25 moških (starih od 19 do 41 let). Analiza odgovorov iz vprašalnika je pokazala, da se je vpliv simulacije izrazil v treh konceptualnih kategorijah: (a) namen, (b) občutki in (c) usvojeno znanje. Teme so bile naslednje: pri namenu: (a) občutek živeti z invalidnostjo in (b) sodelovanje v športih za invalide; pri občutkih: (a) uživanje v športu, (b) izzivi in (c) ranljivost; ter pri usvojenem znanju (a) kaj študenti cenijo in (b) neposredna izkušnja premagovanja izzivov, s katerimi se invalidi srečujejo vsak dan. Kljub splošnemu pozitivnemu odzivu na izkušnjo pa so študentje navajali tudi nerazumevanje in tveganja.

Ključne besede: simulacija, poučevanje, prilagojena telesna vadba

INTRODUCTION

Simulation, namely the imitation or enactment of impairments through structural and functional changes, is used in post-secondary adapted physical activity (APA) courses such as those taught by the authors of this paper. Simulations in APA usually support two traditional approaches to learning about people with disabilities; information related to the nature of disabilities and contact with people with disabilities through practicum and similar experiences.

The rationale for simulations within APA is found in two related theories. Olkin (1999) described simulations as a type of experiential learning. Experiential learning theory defines learning as 'the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience' (Kolb 1984, p.41). Kiger (1992), on the other hand, suggested that 'Essentially, disability simulations are based in role theory' (p. 75) whereby, while simulating a disability experience, the learner develops empathy for people with disabilities that in turn positively transforms their attitude and behaviour. However, in citing the work of Allport (1958), Sherif, Harvey, White, Hood and Sherif (1961) and Tajfel (1982), Kiger supported the argument that in order to change attitudes information, contact or simulation are not sufficient for promoting change. He pointed out that equal status contact, common goals and diverse inter-group contact are necessary components of the experience. Equal status is based on common, meaningful goals that provide the context for positive co-operative interactions. It is on the basis of this understanding that we chose in our APA simulations inclusive wheelchair basketball and goal ball as the two main simulation experiences.

Recently through discussions with friends who have a disability and with each other we challenged our assumptions on the efficacy and appropriateness of these simulations. A review of the literature suggested that this issue had not been addressed within an adapted physical activity setting. The review also revealed that the majority of the existing literature uses simulations wherein learners participate in exercises that challenge them to engage in a familiar task versus one that may be novel. For example, in a study involving medical students by Crotty, Finucane and Ahem (2000) instructors used tasks such as a student who is 'blind' shopping in a supermarket and a student who is 'paraplegic' visiting an art gallery. In the present study, students were introduced to tasks that were new to all except for one or two participants. They played wheelchair basketball and goal ball, Arguably this approach could be construed as merely learning a new sport and indeed it was seen that way in part by the researchers. We recognised, however, that in the process students are introduced to the activity by firstly adopting a simulated disability; the loss of vision with eye masks and the loss of mobility with their restriction to wheelchairs. Although our students wore blindfolds and sat in wheelchairs, on the basis of ethical considerations we did not enforce compliance.

The purpose of this qualitative study, therefore, is to examine the perspectives of APA students concerning the use of disability simulations in adapted physical activity classes. We focussed on examining the feelings and meanings assigned to simulation experiences of a convenience sample of APA students.

Previous research on simulations experiences of college and university students tended to measure attitudinal changes (Fichten, Compton & Amsel, 1985; Grayson & Marini, 1996;

Lyons, 199; Wright, 1978). This unique study analyses emerging themes based on student perspectives associated with their feelings about and meanings they ascribed to the experience. Attitudinal research on simulations generally supports a positive experience and this research therefore explores the opinions of students and what meaning they assign to their positive experience. It further discusses the future use of simulations and further research.

Simulation

As a learning tool simulation has been studied broadly; it has been investigated within pre-school, grade school, high school and post-secondary levels, including medical education (Baesler, 1995; Colwell, Thompson & Berke, 2001; Crotty, et al., 2000; Dittmer, 1991; Pentland, Hutton, MacMillan & Mayer, 2003; Reed & Kidd, 2004; Wilson & Alcorn, 1969;). Simulations are also used for pre-service and in-service teacher training (Eichinger, Rizzo & Sirotnik, 1991; Wilczenski, 1994) and nursing and rehabilitation training (Dickens-Smith, 1995; Pentland et al., 2003; Scullion, 1999; Semple, Vargo & Vargo, 1980; Siegel & Jaušovec, 1994). Generally the purpose of simulations in these settings is to raise the learner's level of awareness about disabilities and to influence a positive attitude to people with disabilities. Early research (Clore & Jeffrey, 1972; Pulton, 1976) described the use of simulation as a powerful learning tool for influencing positive attitudes to disability. However, results are inconsistent in studies where post-secondary students are part of simulation exercises in relation to disability. For example, in Clore and Jeffrey's study of undergraduates involved in a 30-minute simulation, where they were restricted to using wheelchairs, the participants demonstrated more positive attitudes to people with disabilities than the controls. By comparison, graduate students' attitudes after a 24-hour simulation of the restricted use of wheelchairs in their day-to-day activities did not differ significantly from the controls (Sawyer & Clark, 1980) and no attitudinal change was evident for physical therapy students after simulating various disabilities (Semple et al., 1980).

In the study by Crotty et al.(2000), medical students engaged in a curricular unit on disability and rehabilitation completed four topic areas. They followed an inpatient in a rehabilitation ward; they visited two people with disabilities living in the community and performed an assessment; they visited a support service in the community; and they simulated having a particular disability that was assigned to them. The simulation exercise (role-playing) was rated as highly valuable by 85% of the respondents but the involvement with the patients in the ward (contact) was rated the most highly (89%). The results were reported as very positive. However, the researchers only reported one comment from the role-play section of the open-ended questionnaire. 'Adopting a disability was similar to things I did in high school and for my bachelor's degree. Therefore, my time would have been better spent on other areas of medicine in which I still have deficits' (p. 663).

To judge the usefulness of simulation exercises as a learning tool, Pfeiffer (1989) applied assertion analysis to quantify data collected from university students who had completed a wheelchair familiarity exercise. Tasks assigned included manoeuvring an awkwardly accessible room, and using a wheelchair lift and elevators. Data were categorised according to positive, neutral and negative references to the exercise, a wheelchair, persons with disabilities, self, observers, and obstacles. The exercise itself scored a ratio of 6:1 positive to negative reactions. However, reference to people with a disability saw the highest ratio (17:1) followed by the obstacles (12:1). The instructor in this instance was a person with a disability and that factor

was believed to have influenced the persons with disabilities score. In the obstacles session, students learned what happens when a wheelchair user encounters environmental challenges. The exercise was determined to be useful and successful in producing a positive impact.

Scullion (1999) criticised the use of simulation because it focuses on the individual and is consistent with a medicalised view of disability. In earlier research (Scullion, 1996), he found that simulations leave a false impression of disability. In his opinion, simulations can perpetuate the social oppression of people who are disabled and reinforce the conceptualisation of disability as an individual phenomenon thereby ignoring the notion of a disabling society. He identified the need 'to increase awareness of the social construction of disability and raise the profile of disability as an equal opportunity issue' (p. 654).

French (1992), in a critical review of simulation exercises in disability awareness training, suggested that the results of research reporting positive effects do not necessarily support using simulation as a learning tool. Indeed, she stated that many people with a disability and their organisations 'are convinced, not only that the practice does not work, but that it is positively harmful' (p. 259). Her concern was that simulation exercises give a totally false impression of what it is like to have a disability. Participants are misinformed and at best are given only a small sample of what it is like to experience the onset of a disability. Hellenback (1984) shared French's view that because the focus of these exercises is on difficulties, problems, inabilities and inadequacies the participants in a simulation emerge with misconceptions and false impressions.

French (1992) cited the London Boroughs Disability Resource Team (LBDRT) that described simulation exercises as 'part of the medical model approach to disability and serves to reinforce the negative view that disability is only some terrible personal tragedy and cannot encompass the view of disability as part of a fulfilling or unfulfilling life experience' (p. 264). As a result, the LBDRT now refers to disability equality rather than disability awareness training because disability equality encourages participants to concentrate on their responsibilities to people with a disability rather than attitudes.

A second reason French suggested simulations are inappropriate is because most people with a disability preferred to be viewed in the same way as others. Unfortunately, when participants stumble in their simulation exercises, look helpless and ridiculous and sometimes laugh at themselves, it may make people with a disability appear to be superhuman and heroic. Many people with a disability and their organisations try to reject this image as one that is misleading and damaging. As a result, we increasingly began to review the ethics and consequences of simulation programmes.

Ethical concerns of simulations address the risks to participants such as coercion, confidentiality issues and stress; and benefits for the participants, for people with disabilities, and for the community (Kiger, 1992). To examine a training programme and consider the ethics and consequences, Pentland et al. (2003) investigated brain-injury simulations with a sample of 72 professionals that included neurologists, occupational therapists, trainee clinical psychologists and social workers. The simulations covered mobility, visual impairment, sensory impairment, dyspraxia, divided attention and dysphasia. After each of these simulations, the participants were asked about the task and, if it was too easy, the difficulty was increased. When the rotations had concluded the participants gathered for a debriefing and a discussion of the experience. In response to the question, 'What words best describe your feelings about what

you have experienced?', the most common words used were 'frustrating', 'tiring', and 'eye opening'. In response to the question, 'Would the experience you have had today alter the way you would work with patients in the future?', the majority (69 out of 72) responded positively using words such as 'increased understanding', 'increased empathy', and 'allowing patients more time to complete tasks'. The researchers concluded that simulation exercises help increase the understanding of the nature of impairments and disabilities that may follow an injury.

Peterson and Quarstein (2001) used a unique approach in a 3-hour simulation exercise for 20 professionals from health services. Their task was to together prepare lunch for 20 people. They simulated 11 different disabilities between them. The task was successfully completed in 1.5 hours. This sample was highly trained, experienced, specialised staff who work with people with disabilities yet the simulation was deemed beneficial. In a 1.5 hour follow-up discussion the participants' responses were positive. For many, the simulation offered an important reminder that people with disabilities need longer to complete tasks, and that someone with a disability can complete as much and sometimes more than someone without a disability. Participants reported a renewed sensitivity and positive attitudes to attempting the better meeting of the needs of people with disabilities.

Two authors who have disabilities have opposing views regarding the effectiveness of using simulations in academic settings. Pfeiffer (1989) studied the response of students to a simulation exercise and found that, as a tool for education and awareness, simulation was highly effective. A contrary perspective is held by Olkin (1999), who stated:

I most emphatically discourage the use of such exercises for a variety of reasons: (a) they do not simulate disability; (b) simulating a disability for a short period of time cannot approach the psychological impact of 'forever'; (c) simulation does not address disability is a social construct; (d) simulation does not reflect a minority model of disability where the locus of impairment resides in society; (e) there is no quantitative evidence that simulation exercises work; (f) students may think they understand disability after simulation and abandon further study of disability; (g) ethical issues, and (h) it is offensive and rude to attempt to imitate a person with disability (p. 329)'.

As noted earlier, one of the purposes of simulation exercises used in adapted physical activity courses may be to create positive attitudes and reduce prejudice through increased awareness. If those outcomes are the reverse, then the concerns expressed by Olkin (1999) obviously need to be addressed. Kiger (1992) questioned the use of simulation if participants finish with more negative attitudes to persons with a disability than existed prior to the exercise. Wright (1978) referred to the risk of a previously existing negative attitude and growth of pity as participation in exercises can create a depressed, inferior and helpless view of people with a disability. Finally, Finkelstein (1991) raised the issue of the ethical responsibility to people with disabilities, as simulation exercises are seen to be insulting because they trivialise the disability itself.

Based in part on ethical implications, French (1992) and Olkin (1999) were emphatic that simulation exercises should not be used in awareness training. For example, 'those who are blind have developed different brain pathways, are well practiced in alternate modes of navigation and communication', 'they are not inept, helpless or dependent, as the blindfolded person is likely to be' (Olkin, 1999, p.329). Indeed Olkin found it rude when people imitate a person with a disability. Kiger (1992) meanwhile supported simulation but only with a number of caveats. These include clarifying the theoretical connection between the simulations and

changing attitudes, the careful design of the exercise, and assessing the risks and benefits to the participants, and a post-simulation evaluation. Despite existing messages against using simulation exercises the literature is not definitive. Most research demonstrates positive outcomes. Therefore, simulation appears to be widely practiced in adapted physical activity (APA) professional education and is identified as a learning tool by Dunn (1997).

As a result of the varied and contradictory views addressed above, we believe that the practice of using simulation in undergraduate APA courses should be investigated relative to its appropriateness as a learning tool. According to Hutchings and Shulman (1999), the scholarship of teaching should investigate 'not only teacher practice but the character and depth of students' learning that results (or does not) from that practice' (p. 13). To better understand the character of students' learning, this study examines the feelings and meanings assigned to disability simulations in adapted physical activity.

This study was thus designed to focus on the experience of simulation. Kiger (1992) suggested that valid and reliable instruments are required to measure attitude changes but that it is also important to gather more qualitative insights from the participants themselves. Therefore, instead of using assessment inventories this qualitative study uses an open-ended questionnaire in order for the students to 'speak in their own voices' (Henderson and Bialeschki, 1994, p. 24).

METHOD

Participants

Using purposive sampling, (Fenning, Parraga, Bhojwani, Meyer, Molitor, Malloy, Labiak, Taube & Mulcrone, 2000; Patton, 2002; Thomas & Nelson, 2001), we recruited undergraduate students from APA courses at our respective institutions. This sample was purposive in that students were those from whom we wished to learn about their feelings and the meaning they ascribed to their simulation experiences. The participants encompassed 25 men, 54 women and four who did not identify their gender. The total sample ranged in age from 19-41 years with the mode age of 20 years.

Instruments

Instrument

After a review of the literature, it was found that no instruments were deemed suitable for the purposes of this study. As a result we created our own short questionnaire. The advantages associated with using the questionnaire were affordability, unobtrusiveness, and efficiency. However, several limitations also exist and are addressed later in this paper. Quality questions required reflection and feedback from others and therefore the questions were given to another expert in APA and ample time was given 'to explore phrasing and choice of words that achieved clarity, precision and brevity' (Krueger, 1988, p. 59).

The final student questionnaire consisted of demographic queries followed by a series of open-ended questions. The questionnaire asked: (a) in your opinion, what was the purpose of the simulation activities presented in class? (b) how did you feel during these simulations? (c) what do you think was the most valuable aspect of these simulations? (d) what did/did you not like

about these simulations? (e) were the simulations appropriate for the class, why and why not? (d) what were the challenges that you faced during the simulation? and (e) what adaptations would you recommend regarding the use of these simulations in future classes?

Equipment

Participation in the simulation activities required special equipment. We used goal balls and blindfolds, along with basketballs and a combination of standard style and various sport wheelchairs.

Design

The study applies a phenomenological (Husserlian) perspective as we are interested in the meaning, structure and essence of the lived experience of the students participating in the simulation. The focus then is 'on exploring how human beings make sense of experience and transform experience into consciousness, both individually and as shared meaning' (Patton, 2002, p. 104). Our intent is to 'understand the meaning of an experience to the participants in a specific setting' (Thomas & Nelson, 2001).

Procedure

In a lecture held prior to the simulation activity, students were given instructions on the purpose of the simulation and informed about how they would be participating in wheelchair basketball and goal ball. These two sports were chosen in part because they addressed the suggestion by Kiger (1992), referred to earlier in this paper, that in order to change attitudes equal status contact, common goals, and diverse inter-group contact were necessary components. In our estimation, participating in wheelchair basketball and goal ball facilitated equal status between athletes with disability who play these sports and students from APA classes. Students were given the option to participate or observe, thus addressing issues related to coercion and stress as a possible risk identified by Kiger (1992). None opted to observe and not participate in any of the simulation activities. To begin the 50-minute class, wheelchair athletes with disabilities gave the students instructions on wheelchair basketball and an athlete with a visual impairment instructed them in goal ball. This was followed by a scrimmage where students were participating with people with disabilities who had various levels of skills, ranging from novice to elite in the respective sports. Due to class time constraints, the debriefing occurred during the following class that was either two or three days later. The purpose, namely to learn about disability sports through participation, was reviewed and a classroom discussion ensued. Not all students participated in the discussion.

In a lecture held approximately three weeks later, those who had volunteered to participate in the study were asked to sign a consent form and then given a copy of the questionnaire. The questionnaire was designed to take approximately 20 minutes in order to fit within the class time however the students were given unlimited time to answer the questions if they wanted to remain in the classroom after the class had ended. The questionnaire was distributed and collected by the researcher who was not the class instructor. In one of the classes, however, students were given the questionnaire by their regular instructor and were given time in class to complete them with the instructor leaving the classroom early. Students were then asked to submit the completed anonymous questionnaires by placing them in the instructor's mail slot located in a locked box in the main hallway. It was hoped that in both scenarios the

students would not feel compelled or coerced to complete the questionnaires in order to curry favour with the instructor. Responses from the questionnaires were transcribed verbatim and collated.

Data analysis

Following the collating of responses, data were organised using content analysis (Bogden & Bilken, 1982, Patton, 2002). The analysis process used the three-stage approach outlined by Strauss and Corbin (1998), beginning with open coding, followed by axial coding, and completed with selective coding.

The first stage or open coding involved an immersion into the data including a detailed analysis of the questionnaire wherein each statement was reviewed separately.

Axial coding began as the data were placed into separate Word document files to be edited and organised into a comprehensible format. The researchers compared concepts, as each emerged, leading towards a category (or a classification of concepts). This occurred as researchers made notes and the first iteration of a classification/coding scheme emerged. The purpose of this second stage was to reduce the total content to a finite set of categories. This replicated the process described by Vogler, Koranda and Romance (2000), where the researcher 'intuitively developed higher order conceptual categories' (p. 166).

The third stage involved selective coding whereby the researchers tried to identify themes within the various categories (Patton, 2002). Themes were defined by van Manen (1990) as the experience of focus, a simplification, not objects one encounters at certain points or moments in a text, and a form of capturing the phenomenon one is trying to understand. Here we utilised both inductive and deductive methods of establishing a relationship. This type of analysis has been described as the most demanding and least examined aspect of the qualitative research process (Fox-Wolffgramm, Boal & Hunt, 1998; Miles, 1979; Piore, 1979).

RESULTS

'In the social sciences there is only interpretation. Nothing speaks for itself' (Denzin, 1994, p. 31). With that in mind we have presented as accurately as possible the themes that emerged from the methodology described earlier, while attempting to refrain from imposing our own biases. Three categories of data were created from the responses to the open-ended questions: purpose, feelings and learning. These categories reflect the questions, however the open-ended nature of the questions allowed an opportunity for the students to describe their personal meaning and understandings of their experience. Direct quotes are used to illustrate the themes that emerged within each category and to ensure that the voice of the participant is represented accurately.

Purpose

Students' understanding of the purpose of engaging in the simulation activity as part of the APA course varied, but several themes emerged. Two dominant interpretations were to understand what it was like to have a disability and to learn a disability sport. Words most commonly used were 'feels like to have a disability', and 'how people with disabilities manage'. Examples of ways of expressing their understanding of disability included 'what it feels like to

live with a disability'; 'provides a better understanding of what it feels like to have a disability'; 'to become more aware of how people with a disability have to get through everyday activities as well as recreation activities'; 'to achieve an understanding of disability in a physical sense'; 'to simulate a person with a disability'; and, 'to get an idea of what it is like to have a disability.'

Secondary responses related to the directed purpose of participating in disability sport. Words of understanding included, learning how to play a disability sport, and other comments supporting this interpretation such as, 'to experience new sports/activities that are unfamiliar to many people and to gain a new found respect for the sport and its athletes'; 'to introduce us to a sport/activity that we may have never tried before'; and, 'to feel what it's like to not be able to use your whole body in sports.' In addition, several students understood the activity as having the dual purpose of experiencing what it is like to have a disability and to learn wheelchair basketball and goal ball.

Other themes that emerged were empathy and awareness. For example, comments on the purpose ascribed to the simulation included, 'to create empathy for people with disability'; 'I feel like if something like what I'm doing (e.g. being blind) happened to me that it would be difficult to adjust'; 'I'm glad that I have legs – that work'; and, 'to empathize with people with disabilities.' Other respondents focused on awareness as illustrated by the following comments: 'educates participants'; 'awareness of how those living with disabilities need to have organised forms of sport to participate in'; 'become aware of how those people participate in activities'; and, 'it validated events (i.e. wheelchair basketball, goal ball). It brought about an awareness about the remarkable athletes that play them.'

Feelings

This category related to the students' feelings about their experiences while participating in the simulation activity. Here students wrote that the simulation made them feel in ways that can be associated with three themes: enjoyment of sport, challenged, and vulnerability. For example, many students enjoyed themselves and thought it was fun. They expressed their feelings with comments such as 'Curious, and a little hesitant because the sports are very difficult. But once I got into it, it was so much fun'; 'I like wheelchair basketball, it is very fun'; 'I really enjoyed wheelchair basketball. I had a lot of fun. I didn't even think about not using my legs, it just felt like part of the game'; and, 'great, the simulations were educational and fun.'

More commonly, the students referred to the second theme through their feelings of being challenged. Comments on this interpretation include, 'I was clumsy and slow about where the ball was and how to best get to the ball.'; 'I felt extremely challenged. In the goal ball game I didn't know what was going on because I couldn't see'; 'I felt a little frustrated because I couldn't perform the sport. I was too focused on trying to use the wheelchair'; 'tired, they were difficult'; and 'I was surprised at how hard and challenging it was.'

Vulnerability was the most common theme that emerged from the students' expressions of feelings. Some examples are as follows: 'uncomfortable, not sure what to expect'; 'very unsettled, especially when vision impairment was the issue. Goal ball was nerve racking having the ball flying at you with only hearing to determine its direction or velocity'; 'stuck, I just wanted to rip off my goggles when in goal ball I couldn't find the line and to crop my feet from the wheelchair in WB ball'; 'uncomfortable, only because I am used to having the abilities that

were taken away'; 'I felt weak, vulnerable and insecure'; and, 'strange, very difficult. I felt like I had a disability. I was a minority in a sense.'

Learning

The learning that the participants ascribed to their experience fell into the third category. Here the dominant themes were associated with: (a) what students valued from participating in the simulations; and (b) the contribution the activities made towards first-hand experience with the every day challenges that face people who are living with disabilities.

Comments were generally related to either the opportunity of hands-on experience or to the practical application of classroom learning. For example, student comments regarding the value of experiential learning include: 'it gives us a hands-on approach to learning'; 'it's related to what we learned in class and helpful for people who want to work in this field'; 'it's related to the Paralympics and Special Olympics that we covered in class'; 'I liked actually doing it rather than just studying it'; 'the simulations helped us to understand and gain a different point of view for the information taught in class'; and, 'it is a way of applying learning. Students won't forget the lessons they learned'.

Others related their experience to service delivery: 'as you learn to administer service in APA it's important not to lower your expectations with individuals. These people represented to us highly motivated people who have accomplished what some may think they never could.'

First-hand experience with the challenges that face people who are living with disabilities was meaningful as revealed in the following comments: 'I thought the unique challenge was lots of fun, although it would be difficult to be constrained to these conditions all the time'; 'understanding just how difficult the sports are'; 'understanding challenges faced when certain things are limited'; 'they helped me to appreciate the activities and how much these athletes work. I don't think I would have gained that appreciation without trying them'; 'it makes us appreciate that much more what they are going through'; 'if we are to work with people with disabilities it helps us to understand the challenges they face'; and 'it helped me appreciate how physically demanding it can be to have a disability.' Some students noted that 'more time was required' while another response suggested 'the experience did not offer enough variety of simulations.'

DISCUSSION

This study examined the expressions given by students about their participation in the APA simulation exercises. The ultimate outcome was to identify the essence of the phenomenon. This was pursued with the hope of providing some insight into the impact of simulations on the participants and to consider this information in light of the future use of simulations in APA.

Consistent with Kiger's (1992) caveats, the course instructors introduced the simulation by clarifying the theoretical connection between the use of simulations and changing attitudes. Further the purpose for the class, learning wheelchair basketball and goal ball, was also clearly explained. The simulation exercises had been carefully designed and well-rehearsed from APA courses that were offered in previous years. The presenters, because of their previous experience with simulation presentations, assumed the assessed risks and benefits to the participants.

Wheelchair basketball and goal ball addressed the issues of equal status contact, common goals, and diverse inter-group contact. Lastly, a post-simulation evaluation (debriefing) was conducted.

The results suggest that positive effects, misunderstandings and the risks described by Pfeifer (1989) and Olkin (1999) were the outcomes of these simulation exercises. For example, the students responded positively to the exercise and reported a new perspective of disability sport but most saw the purpose as finding out what it feels like to have a disability. Positive comments from the students referred to better enjoying the simulation exercise and having an opportunity to meet Paralympic athletes. Several students suggested that more time was needed in order to fully explore the myriad of sporting/recreational opportunities for people with disabilities which could be perceived as a positive sign that students enjoyed the simulation process and respected its potential to boost awareness and insight.

Overall, the outcome was generally positive responses counterbalanced by the students' misunderstandings of the purpose. The categories and themes that emerged paint a picture of a rich meaning being associated with the simulation experience.

There were, however, a few areas that raised concern about the continued use of simulations and, in particular, to its purpose. The purpose of the exercise as presented to the students was not to stress the reality of actually having a disability, rather it was to participate in disability sports. Nonetheless, many students responded that they believed the purpose was to learn what it would be like to have a disability. This misinterpretation may be the result of the delay between the times that the simulation debriefing occurred and when the students completed the questionnaire. We view the time lag as a strength of the study. The questionnaires were not presented immediately after the simulation class, rather after a delay of three weeks. The responses in this study can therefore be viewed as the enduring perspective that the students have about the simulations. These responses then lend themselves to the potentially harmful results of simulations as noted by French (1992) and Hallenbeck (1984). That being said, it would therefore seem that it is imperative that the purpose be stressed frequently and in different forms (verbal and written) if simulations are to be used.

The feelings of frustration and vulnerability were consistent with the findings of Pfeifer as well as those of Olkin (1999). Both report that these feelings are common to adults participating in a simulation. Anxiety of vulnerability has been identified as a possible reason why those without disabilities may be hesitant to interact with those with a disability. Consequently, instructors should respect this feeling of students yet note how its persistence could jeopardise and influence future interactions.

Learning during the simulations provided the greatest sense of achievement to the students. It appeared to be exhilarating in many ways to learn a new sport and it was affirming to corroborate classroom learning through experience. The challenges and failures they experienced during the simulations caused them to think about disabilities in different ways. Several wrote about the abilities they had observed in the presenters.

One issue that was associated with our study that likely impacted on the effectiveness of the simulations was the focus on sport. In our opinion, sport is one area where people both with and without disabilities find common ground. The elements of commitment, hard work and competition are the same in disabled and able-bodied settings. Further, the simulation

focus was on a sport model and not on the medical model of disability that French warned is detrimental to simulation activities. Indeed, it appeared that the students may have viewed the use of wheelchairs in the same way that they would use a bike in a cycle competition. As a result, the students may not have viewed the athletes with a disability as super-human, not pitied them but simply viewed them as athletes. As well, our focus on sport also addressed the issue noted by Finkelstein (1991), namely of trivialising the disability. Previous lectures within our APA courses had dealt with the aetiology of spinal cord injuries and visual impairments along with issues related to access, inclusion and equity thereby providing the necessary background information required for these topics.

It was beyond the scope of this research to determine whether students conceptualised disability as an individual medicalised phenomenon (Scullion, 1999). However, the language they used in their responses and the orientation of their comments may suggest that APA simulations do not present a socially-oriented concept of disability. This issue could be addressed in future research that would examine how simulations increase awareness of the social construction of disability and how it educates students about disability as being an equal opportunity issue.

Future research could also focus on differences in experiences with simulation between men and women. There was no attempt to delineate differences between genders; there were significantly more women than men among the students who completed the questionnaire.

Finally, it is important to reflect upon the method used to collect the data and the chosen data analysis process. Using the questionnaires for the student participants limited our ability to explore in more detail the meaning they ascribed to the simulation experience. As well, it is possible that the researchers committed what is referred to as a Type III error in that we simply asked the wrong questions (Thomas & Nelson, 2001).

Although we were careful not to force compliance directly or indirectly, the fact that no students chose to observe and not participate in the simulations may have indicated a level of coercion and therefore a bias to participate. As well, there was no attempt to see if the feelings regarding the simulation endured beyond three weeks or whether this was a one-off impression. Kiger (1992) suggested that there is the potential for participants to have a more negative opinion of people with disabilities after the simulation. Our approach did not include pre- and post-testing and therefore this was not measured. Finally, the data analysis process may have benefited from the use of a computer programme such as NUD*IST that is designed to help with data processing, mainly by coding.

Meadows and Morse (2001) suggest that for qualitative research to be considered good research it must at a minimum attain one of three goals (with the ideal being all three). These include building upon existing and relevant literature, having strong methodologies, and being based on a solid research design. We believe that we have addressed potential challenges within the design and method and, most importantly, have built upon the existing knowledge as it relates to the use of simulations in adapted physical activity.

Conclusion

The purpose of the study was to examine the perspectives of APA students regarding the use of simulation activities in their classes and to thereby contribute to the existing knowledge about the use of simulations as a learning tool. The existing literature on the efficacy of simulation as a training or learning activity is divided. Olkin's (1999) voice represents some

people with disabilities who oppose the use of simulation while Pfeiffer (1989) represents the opposite view.

Whereas most research on simulation exercises examines the impact on participants regarding their attitude to disability, this study probed the student experience in terms of its meaning for them and how they felt about it. Themes emerged from three question-driven categories: purpose, feelings, and learning. For purpose (a) feeling what it is like to have a disability, and (b) participating in disability sport; for feelings (a) enjoyment of sport, (b) challenges, and (c) vulnerability; and, for learning (a) what students valued, and (b) first-hand experience with the challenges that individuals with disabilities face every day

Simulation exercises that utilise activities such as goal ball and wheelchair basketball offer an opportunity to learn new sports. It is in this context that APA classes might be viewed differently than the other simulation programmes reviewed in this article. There is, however, always a risk of reinforcing negative stereotypes of disability by using simulation in APA classes and these should be minimised through the proper use of debriefing. Coupled with the recognition that disability awareness can be argued as being very much about emotional responses, this opens the potential for negative impressions. The potential for a positive impact exists, however, in this study misunderstanding and risks were evident.

Based on the data collected in this study it would appear that simulations using a sport model provide meaningful learning opportunities. However, the question on the efficacy of simulations generally remains unknown as the question is complex and requires further examination.

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