

Research paper

Personal Meaning of Wheelchair Rugby Participation by Five Male Athletes

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Abstract

This phenomenological study explored the meaning of wheelchair rugby participation as expressed by five athletes. Themes emerged from their stories about perceived positive outcomes in physical health, psychosocial well-being, expression of an athlete identity, and hold meaning related to playing a full contact sport. The study findings demonstrate the importance and value of sport participation for persons with tetraplegia. These findings support the use of adapted sport as an impactful intervention when working with persons with spinal cord injury.

Keywords: *Athlete identity, physical health, tetraplegia, well-being, wheelchair rugby*

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One of the most popular and fastest growing adaptive sports for persons with a cervical spinal cord injury (SCI), otherwise known as tetraplegia, is wheelchair rugby (WR). Wheelchair rugby was invented in 1977 in Winnipeg, Canada. A group of athletes with tetraplegia sought an alternative to wheelchair basketball that would allow players with reduced arm and hand function to participate equally. Now known as WR, the sport was originally named Murderball. The name was changed because it was difficult to get sponsors for the athletes and events (International Wheelchair Rugby Federation [IWRF], 2011).

Wheelchair rugby combines elements of basketball, handball, and ice hockey to create an aggressive, strategic, fast-moving, and hard-hitting sport. WR is played with a volleyball, on a basketball-size court with goal lines marked by cones and a lined-off “key” area. There are four players on each opposing team totaling eight points per team, based on a player classification system. Individual player classification is based on level of function, with .5 being the lowest and 3.5 being the highest (United States Quad Wheelchair Rugby Association [USQRA], 2011a). In rugby language, persons classed as 1.5 or below are called “low pointers” and those 2.0 or higher are referred to as “high pointers.” The object of the game is to score a goal by crossing the goal line with possession of the ball, while the opposing team is defending that goal. The team with the most points at the end of four 8-minute quarters wins (USQRA, 2011b). In 1994, WR was officially recognized by the International Paralympic Committee as a Paralympic sport and awareness increased due to the documentary film,

Murderball, which portrayed the fierce rivalry between Canada and the U.S. at the 2004 games (IWRF, 2011).

Participation in adaptive sport programs is recognized as contributing to long-term health and well-being for persons with a SCI. A number of researchers have found a positive impact of physical activity for persons with SCI. For example, Hanson, Nabavi, and Yuen (2001) found that athletes with SCI, when compared to non-athletes with SCI, demonstrated greater improvement in physical independence and mobility leading to improved employment. Hicks et al. (2003) revealed that aerobic exercise and resistance training twice a week over a nine-month program significantly improved upper-body strength and decreased pain in persons with SCI. Overall, there was an increase in satisfaction with physical function and perception of health and quality of life for those with SCI when compared to a control group. More specific to WR players with SCI, studies have shown improvements in aerobic capacity through engagement in specific training protocols (Litchke, Russian, Lloyd, Schmidt, & Reardon, 2011; Morgulec, Kosmol, Molik, Hubner-Wozniak, & Rutkowska, 2006).

The benefits of participation in physical activity and sports can also enhance social well-being for persons with SCI. For example, O’Neill and Maguire (2004) discovered that individuals with SCI who were either athletes before injury or were exposed to sports during rehabilitation reported increased opportunities for social contact through sports participation which contributed to community integration. In addition, Anneken, Hanssen-Doose, Hirschfeld, Scheuer, and Thietje (2010) found physically active persons

with SCI demonstrated higher employment, leisure, friends, confidence, and relaxation than inactive persons with SCI. Satisfaction with social aspects of life have been reported in a variety of studies and sports venues (Goodwin, Johnston et al., 2009; Goodwin, Peco, & Ginther, 2009; McVeigh, Hitaig, & Craven, 2009; Tasiemski, Kennedy, Gardner, & Taylor, 2005; Zabriskie, Lundberg, & Groff, 2005).

A number of authors have reported beneficial emotional effects from exercise, recreation, and sport participation in persons with SCI. Specifically, individuals with SCI who engaged in regular exercise showed a decrease in self-reported stress and depression (Hicks et al., 2003). Similarly, Kennedy, Taylor, and Hindson (2006) concluded that individuals with SCI who participated in an adapted sport program with able-bodied partners showed significant decreases in depression, anxiety, and stress along with a higher perceived manageability to deal with psychosocial issues post SCI. Previous research by Blinde and Taub (1999) described sport participation as empowering and believed, "empowerment was an enabling process whereby respondents modified thoughts about their capabilities and perceived themselves as having greater control over life events" (p. 198). Manns and Chad (1999) found that physical activity may play in an important role in reducing the impact of a disability for persons with SCI, in particular persons with tetraplegia. Finally, there was evidence to support a change in self-perception for persons with SCI from a loss of able identity to re-establishing a positive identity through participation in sports and physical activities (Levins, Redenbach, & Dyck, 2004).

The popularity of WR among persons with tetraplegia and the potential benefits from participating in WR, provide reason to further examine the impacts of sport participation. Thus, the purpose of this study was to solicit and share the meanings and understandings about how a select group of athletes perceived participation in WR as impacting their lives. This information should assist therapeutic recreation professionals in validating the use of adaptive sports as an evidence-based treatment option for persons with SCI.

Method

This qualitative investigation stemmed from a larger quantitative study that measured the effects of respiratory training on health-related quality of life in WR players (see Litchke et al., 2012, in press). The objective measures administered in that design left a gap in understanding the experience of playing WR, from the players' perspective. The research team decided to "throw open" analysis and drop apriori assumptions about what meaning might exist, and instead seek to co-create with the players an understanding about the meaning of playing this sport, as experienced by these athletes.

Phenomenology

Phenomenologists believe that knowledge and understanding are embedded in our everyday world and cannot be quantified or reduced to numbers, but that rather understanding emerges from examining people's experiences. Many methods have been used in phenomenological research to gain knowledge about a person's experience. Benner (1994) has led the development of Interpretive Phenomenological (IP)

methods within healthcare professions as a way to articulate the experiences of people within the context of their lives. IP relies on the situationally specific meanings as told in detailed stories about actual events. Most often methods are qualitative and include the researcher listening to stories and only interrupting to clarify, thus allowing participants' perceptions to be revealed (Bryczynski & Benner, 2010). Understanding is further enhanced through the direct observation of a social context and its people (Benner). The phenomenological researcher brackets previous knowledge and attitude related to the studied topic, entering into phenomenological reduction of the lived experience as told by the participant. Inference is limited; and the intent is to describe, however, results can be robust in expressing the effects as perceived by individuals within a context (Giorgi, 2008).

Participants

Five male WR athletes with tetraplegia were purposefully selected from two nationally competitive teams. The teams were located about 120 miles apart, thus players had some familiarity with each other through practices and competitions. The criterion for inclusion was males, injured at approximately the same age (17), with complete lesions at C6 or C7. The purposeful sampling was used so that the males would have been injured at approximately the same time in their lives chronologically and developmentally and similar have physical functioning. Each athlete differed in time since injury (6 months to 17 years), age (17 to 35 years old), rugby experience (1 month to 16 years), and WR classification (.5 to 2.0). All five athletes held

high self-efficacy beliefs (30 to 40) as reported on the General Perceived Self-Efficacy Scale [(GSE) Schwarzer & Jerusalem, 1995]. The GSE is a 10-item psychometric scale with scoring responses made on a 4-point Likert scale (with 1 being the lowest and 4 being the highest). Each item refers to successful coping strategies and implies an internal stability attribution of success despite adversity and barriers. The scores of the GSE range from 10 to 40, with a score from 10 to 20 representing low self-efficacy, 20 to 30 representing moderate self-efficacy, and 30 to 40 representing high self-efficacy (Schwarzer & Jerusalem).

Refer to Table 1 for the individual demographic data (individual names were changed to protect the athletes' identities).

Design and Instrumentation

This investigation was approved by a university Institutional Review Board. After providing a detailed description of the study procedures, written consent was obtained from each participant. Participation was voluntary and in no way associated with being allowed to participate with the team.

Semi-structured interview guide. Interview questions were developed based upon literature about self-efficacy, quality of life, and outcomes associated with wheelchair sports participation. The interview guide was piloted with one WR athlete and revisions were made based on the athlete's feedback (See Table 2 for sample questions).

The initial interview with each athlete took place in a location and at a time selected by the athlete and during the first week of the nine-week data collection period. Each interview lasted

Table 1*Individual Demographic Data*

Participant	Vocation	Age, y	Time Since Injury, y	Lesion level	IC/Com	Cause of Injury	Sport Prior Injury	Rugby Class	Time Playing Rugby, y	GSE Pre	GSE Post
Chad	Gov. appointed	29	12	C6	Com	Gym	Gym	.5	3	40	40
Sean	Vice-Principal	35	18	C6-7	Com	MVA	Football	1.5	17	40	40
Abe	High School Senior	17	.8	C6	Com	MVA	Multi-sport	2.0	.5	32	36
Adam	Computer Programmer	32	15	C7	Com	GSW	Football	2.0	11	39	38
Mark	Criminal Justice Major	21	4	C6	Com	Diving	Football	2.0	3	35	38

Note. Com = complete lesion; C = cervical; Gym = gymnastics; MVA = motor vehicle accident; GSW = gunshot wound; GSE = General Self-Efficacy; Gov =

Governor

Table 2

Primary Interview Questions

Can you tell me how old were you when you were injured? How did it happen?

Where you an athlete prior to your injury? (type of sport, level of involvement)

How soon after your injury did you start playing rugby? How did you find out about wheelchair rugby?

Could you describe any changes you have noticed since you started playing rugby?

Can you compare your social life before and after rugby?

Describe for me how you see yourself? How do others see you?

What are some of the emotional challenges that you have had to overcome since your injury?

Tell me about your motivation to compete and in other life areas?

How do you go about setting goals and sticking to them?

Could you describe for me how others on the team have impacted your ability to cope with problems or master techniques on and off the court?

What have been some of the most meaningful and significant events or milestones since you began playing rugby?

Describe for me how you overcome physical barriers and challenges during rugby and everyday life?

Can you give me an example of how you confronted a problem and found a solution?

When the going gets tough how do you perservere?

approximately 60 minutes. The interviewer used prepared interview questions to elicit discussion. Prompts were used to clarify the participant's story, rather than to direct the flow of discussion (Giorgi, 2008). Responses were recorded verbatim by the interviewer.

Field observation. Athletes were observed by the principal investigator (PI) and three trained graduate research assistants. Field notes were taken at 10 weekend WR practices for a total of 40 hours. Individually, and as group, all five athletes were observed for an additional 8 to 10 hours in informal social settings after practices or on a separate weekend. Observations were also made at one local tournament for 13 hours and one national tournament for 30 hours.

Data Analyses

As recommended by Yin (2003), authenticity of findings was maintained by using multiple data sources to capture experiences and interpret participants' reported responses and behaviors including field notes from over 70 hours of direct observations and pre- and post-interviews. Trustworthiness refers to the validity and reliability of data and the ethical standards that guided the investigation (Guba & Lincoln, 2005). Member checks enhanced the trustworthiness of data. For this study, member checking referred to the process of verifying the credibility of the findings with participants to assure accuracy and adherence to the participants' stories (Creswell, 2007). A follow-up interview was conducted with each athlete after the last day of the nine-week study. This conversation consisted of the PI relaying preliminary findings of the study to the individual athlete and then asking for confirmation or clarification of the information.

A two-hour focus group was conducted with three of the five athletes (Chad, Sean, and Mark) after the national tournament. The research team developed questions for use in the focus group after initial analysis, to verify correctness of information from interviews and observation.

Two athletes (Abe and Adam) were not available at the time of the scheduled focus group; therefore, subsequent phone calls were made to those two athletes by the PI to confirm the findings of the focus group. Additional phone conversations were made with the other three athletes as analyses progressed to check on interpretation or seek additional clarification.

Phenomenological reduction.

The purpose of analysis was to articulate the phenomenon as expressed by the players. Consistent with methods recommended by Giorgi (2008), individual athlete transcripts were created by transcribing interviews, field notes, and audio recordings created during the focus group. First the transcripts were read in their entirety by each of the PI and three assistants. Transcripts were then reread and broken into "meaning units," and color-coded summary sheets were created to organize emerging themes/patterns. Quotations and observations illustrating each theme were extracted from the transcriptions and attached to the colored summary sheets with a general theme at the top, followed by a listing of specific quotes and observations (Creswell, 2007).

Qualitative research methodology literature is vague about an optimal process for resolving disagreements between coders on the meaning of passages (Miles & Huberman, 1994).

Although not required in phenomenological methods, interpretive code

checks were used to determine agreement among coders about code terms or names given to phenomena and to determine whether informant statements and field note observations were being coded similarly. Then, data were reviewed again on five separate occasions by the same coders to increase validation of the salient themes (Creswell, 2007). The process was to establish consistent and stable inter-coder agreement in analyzing and coding data as another marker that researcher bias was bracketed. When disagreements about meanings or codes arose, the point of disagreement was discussed among coders until agreement was reached.

Findings

Five nationally competitive WR players participated in this study to share their meanings and understandings about how participation in rugby had impacted their lives. The men varied in age, time since injury, and experience with rugby. Abe was a 17-year-old male injured in a motor vehicle accident (MVA) six months prior to the study, and had played WR only one month. Mark, age 21, was injured in a diving accident four years prior, and Chad, age 29, was injured 12 years prior in a gymnastics accident. Both had been playing WR for three years. Thirty-two-year-old Adam received a gunshot injury 15 years prior, and had played WR for 11 years. The oldest and longest playing (17 years) of the participants was Sean, a 35-year-old male, injured 18 years prior in a MVA.

Players shared their thoughts and feelings related to playing WR and how participation was perceived to impact their life in general. From their expressed statements and observations,

the following themes emerged indicating that players perceived rugby experiences to have contributed positively to their physical health, psychosocial well-being, and athlete identity, and that players found personal meaning associated with engagement in a full-contact sport.

Physical Health

Each athlete commented on changes in physical abilities and life challenges they overcame on and off the court, such as improvements in strength and endurance. Abe, who had been playing only one month already recognized being stronger, faster, and saw changes in his triceps. Sean and Mark both suggested that playing rugby taught them what physical skills they possessed and how to use those skills in everyday activities.

Of particular interest to all five athletes were changes in their ability to manage activities of daily living such as dressing, transfers, and general functioning such as maintaining balance. Sean explained, "The first time I ever tried to get into the car it took me an hour to transfer into the car, put the chair in, and then transfer out." As his strength improved through playing rugby, this task became easier. Mark shared that he no longer needed human or sliding board assistance to get into his chair eight years after injury due to the strength he gained playing rugby. However, players acknowledged that while WR contributed to these changes to maintain strength, they must keep playing or, "When I don't go to practice, I can tell. I get weak. You lose it fast." (Adam)

Players also noted more medically based health benefits such as fewer urinary tract infections and fewer colds,

improved ability to sleep, and less back pain. As noted in field records, Abe's father commented, "I could send Abe to therapy for the rest of his life and he wouldn't be as in shape as he is here in one week.... This is therapy."

Psychosocial Well-being

These WR athletes shared self-noted changes related to psychosocial skills. All commented in some way about the generalization of sport confidence to life situations. Chad explained, "I am more confident even in situations that have nothing to do with rugby. With my job, I have no fear talking in public." Sean explained how his sport discipline transferred to life. "You start to figure out different tricks and short cuts because you don't have a choice, you must adapt to the circumstances."

One change addressed by players was in their willingness to accept help. Chad, reflected on the changes in his desire and need for help since his injury.

In the beginning, I did not want to accept help. Especially being a low pointer, that was a big problem. When I finally did learn to accept enough help to do what I needed to do in everyday life, playing rugby helped.

Belonging to a team supported players' sense of well-being. Abe provides an example of how a more newly injured person is encouraged through team interactions. "I am a lot more confident knowing that there are people in a chair that don't just sit in the basement all the time." Abe's father commented that even the documentary film *Murderball* helped to motivate

Abe soon after his injury, and how one of the star players from the film played on the same team as Abe. Numerous field notes documented Abe's frequent interactions with this famous star player, asking for advice about such diverse things as how to select appropriate WR equipment and what to do when people stare at him.

Chad, who sustained a SCI as a competitive high school gymnast, stated that he thought his positive self-belief had to do with being an athlete and part of a team. He explained that for 11 years he coordinated wheelchair sports for others to play. About becoming a player he said, "In the last three years playing rugby, I have had more camaraderie, friendships. I am more confident in social settings because of my teammates. I am more confident even in situations that have nothing to do with rugby."

Stress release was also associated with rugby play as stated by Mark. "I can vent to friends and family. However, it is nice being able to release stress through sport, have fun!" Adam uses rugby as a stress release. "This guy who shot me took all this other stuff from me and he is not going to take anything else. The hatred would eat me up inside, so I had to let it go. Rugby helps me do that."

Through rugby involvement, players have experienced opportunities they speculate they may never have experienced such as traveling internationally or being on television. Sean responded to the question "Would you change your current situation for anything in the world?"

No, not even to walk again!
I would not be here today if
it was not for being disabled.

This has provided opportunities that I would have never had a chance to do if I were AB (able-bodied). I was headed on a destructive path and because of my injury I turned on a more promising path. If I did not play rugby I would not be as healthy, happy, strong, confident, and independent as I am.

Full-Contact Sport

Players found deep meaning in playing the game and expressed a strong athletic identity and desire to be seen by others as an athlete, not as someone with a disability. "Rugby is our life!" "Rugby, in a chair or otherwise, is a contact sport. Rugby players are drawn to the sport at least partially because of this contact."

Two prevalent contacts in WR are "hitting" and "tipping." When asked in the focus group, "What is it about being able to hit someone else?" the athletes' sat up straighter and their facial expressions showed excitement. Mark responded, "It's the same as football when you light somebody up; it is the same thing." Sean stated:

I love hitting people. I don't care who they are or if they are bigger than me. . . It is an aggression thing; metal on metal; the sound knocking somebody over and looking at them as they are lying on the court. You know if you like the person you say, 'Hey, are you all right?' If you don't like them, you don't say anything and walk away.

During the focus group, Chad told Sean, "I see the smile on your face when you hit others." Chad went on to say:

Being able to go out and hit people. Just hitting people makes me feel better. I really love the full contact. Getting at the end of the court and being 90 lbs. and hitting the biggest guy and knowing I am going to fly off him not making that much damage. When you get that magic hit, the one where he did not see you coming you wait all season for that. You think it is a normal guy thing. I love hitting someone as hard as I can. It does make a difference in my life.

Chad exemplified the meaning associated with tipping through a story of what happened during a WR competition. Chad and Sean were on opposing teams, and during a final match, Sean's team was down by 20 points. Sean, a high pointer, approached Chad, a low pointer, and tipped up the front of his chair. Chad said, "He gave me that grin like I am gonna dump you over," but Chad was in his new chair and Sean did not know how easy it could be tipped. So as he lifted Chad up too high, he tipped him over. Chad just laid in his chair on his back laughing. Then, Chad's highest classed teammate, a 3.0, came over and tipped Sean over and said, "Just takin' care of my low pointer." Sean lay laughing on the floor next to Chad. The whole crowd started laughing. Chad commented to Sean, "Your eyes were so big when you did that and you realized I was going over. But what that really did between the two of us, was that was probably the most we ever talked after that." Sean said, "Yah, see that kind of stuff is team building/bonding."

Athlete Identity is Important

All five players spoke about a desire that people not pity them or see them as “cripples,” but as athletes. Adam further explained the importance of experiencing the athlete identity.

I play rugby to fill a spot that is missing from all the years playing football. . . I cannot imagine not doing something athletic. If I was not playing rugby, I would be miserable. I would not have an athletic outlet.

The athletic identity carried over to player’s strong desire to convey to others that they are not just persons with disabilities, but are highly competitive and strong athletes. Players wanted others to know that they are more similar to able-bodied athletes than different. Further, players saw playing as a way to educate the general public about persons who use wheelchairs.

Players expressed feeling a responsibility to teach others. Mark said, “If there was anything I would want other people to understand [it’s that] we’re just in chairs. Our lives aren’t any different really. I mean they are, but they aren’t. Athletes are athletes.” Sean added, “I think most people just don’t know how to act around people in chairs. Part of our role as disabled people is basically to teach others that we really don’t want to be treated any differently than anyone else.” Adam also told a story of his education of a family on an airplane. An elderly couple was boarding accompanied by their daughter. Adam sat in the aisle seat and the wife asked him to stand up to allow her husband to get to his seat more easily. He told her he could not stand, which seemed to anger the daughter.

As the older man struggled into his seat, he asked Adam, “Are you one of those crippled guys?” This question led to the group continuing a conversation about Adam’s involvement in WR competitions. He commented, “The whole outlook of the mom and daughter changed as I talked with their dad/husband about being a WR player and the tournament that brought me there.”

Discussion

The findings of this study suggest that, as a result of participating in WR, all five athletes experienced positive outcomes including increased physical health, psychosocial well-being, expression of an athlete identity, and cultivation of meaning related to playing a full contact sport. Improved physical health is an expected outcome for most sport engagement. The three newer players commented on improvements in strength, vitality, speed, and endurance as a result of their participation in WR. Furthermore, players described gaining independence with wheelchair transfers because of WR. This perception is consistent with previous studies that demonstrated physical skills do indeed improve through participation in wheelchair sports (Hicks et al., 2003; Litchke et al., 2011; Morgulec et al., 2006).

Physical gains on the court also generalized to other life situations. Chad commented about his strength improving and carrying over to being able to push his wheelchair further to get to work. This could help to explain the findings of Anneken et al. (2010) and Hanson et al. (2001), where persons with SCI who engaged in sports had higher rates of employment. Three of our five athletes in the current study

were working, and four were attending school.

Players reported that their outlook on life or psychosocial well-being was enhanced through rugby experiences. For example, Abe, who was most recently injured and very new to rugby, remarked that he played rugby because when doing so, he “almost forgot he was in a chair... everyone is the same.” These reports from the athletes are supported by the previous research that found that persons with tetraplegia who participated in wheelchair sports had more opportunities for social contact, increased self-confidence, and social competence on overall quality of life (McVeigh et al., 2009; O’Neill & Maguire, 2004; Stevens, Caputo, Fuller, & Morgan, 2008; Zabriskie et al., 2005). In particular to WR, newcomers to the sport relied on the more experienced players who had been disabled longer to teach them how to do everyday activities and get on with their lives (Lindemann & Cherney, 2008).

Experiences related to WR participation were reported to aide athletes in their sense of social belonging. Adam talked about new opportunities such as appearing on television and traveling. It was observed throughout this study, the WR athletes engaged in many social/leisure activities with other team members in public settings and talked to able-bodied persons about WR and their experiences of being a WR athlete. These findings are supported by Goodwin et al. (2009), who found that WR athletes demonstrated and verbalized a “shared sense of community, membership, and fulfillment of need, influence, and shared emotional connections they used to authentically express themselves their sport” (p. 102). Hanson et al. (2001) also found a posi-

tive impact of sport participation for persons with SCI on community integration versus non-athletes with SCI.

Confidence perceived as gained through WR participation was attributed to increase confidence toward other life functions such as work. Chad and Sean reported that WR training gave them the ability to overcome obstacles by being forced to learn new ways to do things. Abe talked about being more confident and stronger overall due to WR and that this would help him become independent and live on his own. These findings are in agreement with Kennedy et al. (2006) who found that persons with SCI who engaged in a sports training course increased self-confidence, self-esteem, and perceptions of possibilities and capabilities, and learned new skills.

For these players, adopting an identity as an ‘athlete’ was an important outcome of playing WR. Each of the athletes not only practiced multiple times per week with their team, but also socially engaged with each other outside of practice regularly. Team sports, such as rugby, come with social supports and interactions and are found to be influential on the athlete identity development (Tasiemski & Brewer, 2011). Zabriskie et al. (2005) offered preliminary evidence of a strong connection between athletic identity and quality of life for persons with disabilities, including those with tetraplegia. In support of their athlete identity, players were adamant about not being pitied. Mark was adamant about being perceived as a strong athlete and not a person in a wheelchair.

Beyond the therapeutic or clinical interest in the outcomes of sport participation, playing WR for these five males was about fully engaging in the

sport. Hitting and tipping were associated with three distinct outcomes. First was the impact the physical contact had on self-image. Abe remarked that when you hit someone “everyone doesn’t think you’re fragile and going to break.” Goodwin et al. (2009) also found that WR athletes desired a full-contact sport to experience the hit that helped contradict the image of disability. These activities provided a source of empowerment for the athletes. Recent research by Lindemann and Cherney (2008) also found that playing WR restored their sense of masculinity. Previous research by Blinde and Taub (1999) also described sport participation as empowering and a venue to express control over life and abilities.

The second meaning associated with hitting and tipping related to the deep meaning associated with playing the sport, the athlete identity. Both Chad and Mark commented on the excitement and rush of hitting another player with maximum power, which acted as a stress outlet for them. In addition to hitting, the unique aspects of “tipping” or “flipping” were viewed as a sign of not just physical strength, but the emotional power the athlete commanded during these acts. For example, tipping an opposing player during a game is considered a hard hit and a sign of dominance on the field. Conversely, the person who was tipped is viewed as weak or weaker. Chad expressed his displeasure in giving credit to an opponent when he was tipped. He did not want to give the opponent a “boost of ego” for the hit. Lindemann and Cherney (2008) also found that WR players shook the disability image by smashing and hitting into each other.

In addition, Tasiemski et al. (2004) found that the more hours males with

tetraplegia engaged in a sport, the greater their levels of athletic identity. All five participants in this current study engaged in WR for more than 10 hours each week. This may have contributed to their increase/change in perception from seeing themselves as disabled people toward perceiving themselves more as athletes, which may have impacted how others perceived them.

Finally, physical contact was associated with stress relief. The statements by these athletes mirrored the findings by Hicks et al. (2003) and Kennedy et al. (2006), suggesting that sport participation decreases stress and helps individuals manage psychosocial issues related to stress. Research by Gioia et al. (2006) indicated that persons with tetraplegia who engaged in sports had lower levels of anxiety and depression than those who did not participate. Following up in the focus group interview Chad and Sean, who were both involved in that tipping incident, talked about how it brought them together and there was a sense of team building/bonding after the tipping.

The results of this present study may have been affected by the fact that all five players were athletes prior to their injuries. Therefore, it is difficult to pinpoint whether their levels of skill and confidence were low or high prior to their injury. All five of these WR players were athletes, working, or going to school, before and during this nine week training period, which may have affected the results. In addition, all were involved in activities considered of more physical risk prior to their injuries such as football or gymnastics. They were athletes competing at a national level, one with over 17 years WR experience. A group of newer players might not as of yet realized the carry-

over value of their participation. However, as a phenomenological study, the results are not intended for inference, but rather to illuminate the life experiences of five select WR athletes.

Conclusion

One of the most important goals of rehabilitation for persons with tetraplegia is to return to satisfactory life in the community. To that end, this current research study helped identify WR as a means for enhancing participants' perceptions of self and may provide rehabilitation professionals with a richer precise picture of the influence of wheelchair sports on these perceptions.

Replication with other athletes to expand the understanding of this phenomenon is warranted. Upon gaining

a breadth of understanding from the athletes' perspective, future research might delve into more empirical investigations to determine the incidence of similar experiences. In addition, the player's expression of deep meaning from participation lends itself to studies related to wheelchair sports as serious leisure and the culture associated with membership on wheelchair sports teams for persons with SCI.

The study findings helped identify that participation in WR plays a role in the adjustment process on the initial and long-term outcomes for persons with tetraplegia. Therefore, it is important for therapeutic recreation professionals to foster sport participation, including WR, as a means to maximize the psychosocial and physical health and well-being for persons with tetraplegia.

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