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Nagoor Meera Abdullah

Fatin Nabilah Nordin

Mohammad Nizam Mohamed Shapie

Mohd Rahizam Abdul Rahim

Vincent Parnabas

Faculty of Sports Science and Recreation, Universiti Teknologi MARA Shah Alam, Malaysia

Wahidah Tumijan

Faculty of Sports Science and Recreation, Universiti Teknologi MARA Campus Seremban 3

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Correspondent Author

Nagoor Meera Abdullah

Email : nagoor@uitm.edu.my

*Faculty of Sports Science and Recreation,
Universiti Teknologi MARA Shah Alam, Malaysia*

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*Nagoor Meera Abdullah.¹, Fatin Nabilah Nordin.¹, Mohammad Nizam Mohamed Shapie.¹,
Mohd Rahizam Abdul Rahim.¹, Vincent Parnabas.¹ & Wahidah Tumijan.²*

¹Faculty of Sports Science and Recreation UiTM Shah Alam, Selangor

²Faculty of Sports Science and Recreation, Universiti Teknologi MARA Campus Seremban 3

Abstract

An individual's mental state has been identified to play a significant role when performing a sport specific task. This ability leads to the success or failure of every athlete. The purpose of the study is to compare the level of state and trait self-confidence among athletes with disabilities. Total of 100 athletes ($n = 100$) comprises of 61 wheelchair tennis (WT) athletes and 39 wheelchair badminton (WB) athletes age range between 18-54 years voluntarily participated in the study. The athletes were practicing their sports at least from 2 to 18 years. The study uses the reliable instruments that is State Sport Confidence Inventory (SSCI) and Trait Sport Confidence Inventory (TSCI). The questionnaires were distributed during Malaysia Open Wheelchair Tennis Championship and MBPJ-MPM Paralympics Sport Carnival. Trait Sport Confidence Inventory (TSCI) was distributed among subjects approximately 24 hours before the competition and State Sport Confidence Inventory (SSCI) was distributed among subjects within 1 hour after end of the game. Paired-Sample T-test and Independent-Samples T-test data was analysed and shows mean difference of TSCI and SSCI among WT athletes and WB athletes was significant ($P < 0.05$). The mean of TSCI in WT is 4.59 and 4.69 in WB. Meanwhile, mean in SSCI for WT is 7.20 and 7.12 in WB. In conclusion, there is no difference in the level of self confidence among wheelchair tennis athletes and wheelchair badminton athletes. Self-confidence has been linked as contributing factors to athletic performance. The current finding can assist coaches and athletes in understanding level of self-confidence before the competition.

Key words: *Sport Confidence, State Self Confidence, Trait Self Confidence, Disabled Athletes, Wheelchair Tennis, Wheelchair Badminton*

INTRODUCTION

High performance in sports has always been directly related to psychological aspects. (Chang, Peralta & de Corcho 2020). Professionals in this branch who have been working to improve sports performance for several decades have tried to study how the psychological characteristics of athletes influenced their results (García, 2004). Many of the failures were attributed to problems due to anxiety management and others were even listed as "phobia of success". Sport provides opportunities for persons with disabilities to develop social skills, forge friendships outside their families, exercise responsibility, and take on leadership roles. (Stănescu et.al, 2008). Self-confidence refers to a feeling of trust in one's ability to perform successfully and an important determinant of performance, tends to be inversely related to cognitive and somatic anxiety (Reid, Larson and Debeliso 2020). High levels of self-confidence can help to develop positive emotions, strong concentration, setting more challenging goals, increasing effort and developing effective competitive strategies. Studies has shown that self-confidence often distinguishes highly successful athletes from the less successful ones. self- confidence as both a trait and a state. (Gurjar and Kakran 2020). Self-confidence as a trait is defined as a belief or degree of certainty individual usually possess about his abilities to be successful. On the other hand, self- confidence as a sports state is the belief of certainty that the individual possesses at a particular moment about his ability to be successful in his sports (Gurjar and Kakran 2020).

Regular physical activity is associated with multiple positive outcomes among individuals with physical disabilities, improving quality of life (Crawford, Hollingsworth, Morgan, & Gray, 2008), and playing adapted sports is a proven effective activity for improving the health status and quality of life of people with physical impairments (Côté-Leclerc et al., 2017; Yazicioglu, Yavuz, Goktepe, & Tan, 2012).

Wheelchair athletes are generally in a better mood, have greater mastery, and a higher degree of self-efficacy when performing tasks in a wheelchair compared to their inactive counterparts. It was concluded that wheelchair mobile individuals participating in tennis may be more confident about performing tennis skills and general wheelchair mobility tasks than are wheelchair mobile nonparticipants. Participation in wheelchair tennis significantly improves

adolescents' perceptions of general and physical competence. (Campbell, 1995; Greenwood, et al, 1990).

The psychological benefits that wheelchair tennis can provide include a reduction in depression and trait anxiety and an increase in vigour (Muraki, Tsunawake, Hiramatsu, & Yamasaki, 2000). Moreover, wheelchair tennis players are aware of the importance of taking part in sport from a health point of view, and that is one of the main reasons for them playing wheelchair tennis (Wu & Williams, 2001). In many hospitals, people with spinal injuries undertake rehabilitation programmes and participate in different sports (Sanchez-Pay & Sanz-Rivas 2020).

The most factors that considered in influence the athletic performance are self-confidence. Karageorghis and Terry (2010) explain confidence as the belief that athletes are equal to the task at hands as some consequences of totally believing in their own ability. This means an individual belief in them to take any task without any doubt. Persons with disabilities are those who have long term physical, mental, intellectual or sensory impairments facing various barriers in all aspects of their life prevent them from get active in social (Khoo, 2011). Sport events for disabled people a platform that can generate a lot of interest in sports, gain benefits and advantages for them and not only a battle field to shows specific skills that they have. Self-confidence also influences by people surroundings. Coaches, family and friends talks can give big impact to the athletes. Verbal persuasion is one of the sources of confidence highlighted by Feltz (1988). He claims that, people are believes they can successfully accomplish a task or behavior by suggestion, exhortation, or self-instruction. However, verbal persuasion is a weaker inducer of efficacy and is not grounded in personal experience, it may be extinguished by histories of past failures (Feltz, 1988).

McPherson and Thomas (1989) in their study they found that experts' wheelchair tennis players who has more experiences regardless of age performed better than novices on tennis skill and knowledge. Furthermore, experts' decisions and actions were better during tennis game performance because they feel more confidence. Effects of social support upon performance were therefore only apparent when attention was focused on the components of performance

(Rees, Ingledew, & Hardy, 1999). In a study some of high-level badminton players, imagery technique does help them to boost self-confidence (Callow et al., 2001). Moreover, their sense of motivation increases along the competition. The purpose of the study is to compare the level of state and trait self-confidence among athletes with disabilities (wheelchair tennis and wheelchair badminton athletes).

Wheelchair tennis is now firmly established as one of the public's favorite Paralympic sports, having become a full medal sport at the 1992 Barcelona Paralympics. The sport also boasts a highly competitive, international tennis tour comprising over 100 tournaments worldwide, with prize money on offer. The court dimensions and rules of the game are identical to able-bodied tennis, except that the ball is allowed to bounce twice and this second bounce does not have to land within the court area (Diaper and Goosey-Tolfrey 2009).

METHODOLOGY

Sample

A total of 100 (n=100) athletes with disabilities took part in the study. 61 wheelchair tennis athletes (41 male and 20 female athletes) and 39 wheelchair badminton athletes (31 male and 8 female athletes) with their age range between 18 to 54 years old. All of them participating regularly and competing at the regional and international level.

Instrument

The Trait Sport-Confidence Inventory (TSCI) that assess athletes' confident feels in general. Participants need to compare themselves to the "most confident athlete they know" to answer the item. Each of the inventory consists of 13 items, utilize with 9-point Likert scale from 1 (low) to 9 (high). The item scores confidence differentiate between low (scores from 1 to 3), moderate (scores from 4 to 6), and high (scores from 7 to 9). An item of the TSCI asks "compare your confidence in your ability to perform under pressure to the most confident athlete you know". State Sport Confidence Inventory (SSCI) also was provided to them. State Sport Item

in this inventory are same with item in the TSCI. Participants needs to think about how they “feel right now” about performing success fully in the upcoming competition. They need to compare self-confidence with the most confident athletes they know. Both has strong reliability as Cronbach’s alpha coefficient was measured as .93 for the TSCI, with test-retest reliability in two studies of .83 and .86 respectively (Vealey, Robin S, 1986).

Procedures

Permission was granted from both associations top management. This study also was granted permission from the university’s ethical committee. Briefing and explanation was conducted to all the participants. This is to ensure that why they need to answer the questionnaire. Participants also been briefed that they been choose voluntarily and those who participated were ensure of their response are kept confidential. Demographic questionnaire and Trait Sport Confidence Inventory (TSCI) been distributed among the participants. The questionnaire distributed approximately 24 hours before the competition. Each of the questionnaire took approximately 10 to 15 minutes to complete. After questionnaires were submitted, the athletes were informed that the next day they have to answer for the second part of the questionnaire that is State Sport Confidence Inventory (SSCI) then was distributed to subjects within 1 hour prior to the end of the competition. The nature of the study was described at the top of the questionnaire to the subjects. Each questionnaire took approximately 10 to 15 minutes to complete. After completed answer, the questionnaires are collected. Acknowledgement were given to the participants.

Data analysis

Descriptive statistics was utilized to measure the variance. Homogeneity of variance is checked by using Levene’s test. After making sure the homogeneity, Match Sample T-test and Independent T-test were conducted. The data were analysed using SPSS analysis software version 21.

RESULTS

Table 1 below show the distribution of the subjects based on the sports, gender, type of disability and the level of achievement.

Table 1: Descriptive Analysis on the subjects

Variables	Frequency	
	Tennis	Badminton
Gender		
Male	41	31
Female	20	8
Disability		
Amputees	27	11
Spinal Cord Injury	12	4
Spina Bifida	6	2
Paraplegia	3	6
Polio	5	6
Others	8	10
Achievement		
High	6	5
Medium	41	17
Low	14	17

Table 2: Levene's Test Analysis on the Subjects

Variable	Levene's Test	
	F-statistics	p-value
Trait self-confidence	1.24	0.268
State self-confidence	9.516	0.003

Table 2 reveal the Levene's Test Analysis on the subjects. The trait self-confidence, the p-value is 0.268 greater than 0.05. Therefore, the variance is equal and the *t* statistics shows be tested on equal variances assumed. While, for state self-confidence the p-value is 0.003 less than 0.05. Therefore, the variance is not equal and *t* statistics shows be tested on equal variance not assumed.

Table 3: Level of State Self-Confidence and Trait Self-Confidence among the Wheelchair Tennis

Athletes

Variable	Mean (SD)		p-value*
	State self-confidence	Trait self-confidence	
Overall	7.20 (0.62)	4.59 (0.94)	0.00
Male	7.15 (0.62)	4.68 (0.96)	0.00
Female	7.32 (0.63)	4.39 (0.89)	0.00

(* $P < 0.05$)

The Paired T-test analysis in Table 3 shows the inferential statistics of self-confidence of trait and state of wheelchair tennis athletes. The mean has change from 7.20 during state self-confidence to 4.59 during trait self-confidence. The state self-confidence for male athletes is 7.15 to 4.68 in trait self-confidence. Meanwhile for female athletes, state self-confidence is 7.32 to 4.39. The p-value is 0.00 less than 0.05 therefore there is a significant difference. This study shows that there is a significant difference between state self-confidence and trait self-confidence competition among wheelchair tennis athletes. Moreover, female is more contribute to state self-confidence compared to the male athletes, while male is more contribute to trait self-confidence.

Table 4: The Level of Trait Self-Confidence and State Self-Confidence among Wheelchairs Badminton Athletes

Variable	Mean (SD)		p-value*
	State self-confidence	Trait self-confidence	
Overall	7.12 (0.42)	4.69 (0.77)	0.00
Male	7.08 (0.43)	4.77 (0.75)	0.00
Female	7.27 (0.39)	4.38 (0.79)	0.00

(* $P < 0.05$)

The Paired T-test analysis in Table 4 shows the inferential statistics of self-confidence of trait and state of wheelchair badminton athletes. The mean has change from 7.12 during state self-confidence to 4.69 during trait self-confidence. Meanwhile, state self-confidence for male is 7.08 to 4.77 in trait self-confidence. For female athletes, state self-confidence is 7.27 to 4.38.

The p-value is 0.00 less than 0.05, so there is a significant difference. This study shows that there is a significant difference of mean between state self-confidence and trait self-confidence competition among wheelchair badminton athletes. Moreover, female athletes is more contribute to state self-confidence compared to male athletes, while male athletes is more contribute to trait self-confidence.

Table 5: The Differences in the Level of Trait Self-Confidence among Wheelchairs Badminton Athletes and Wheelchairs Tennis

Variable	Mean (SD) self confidence		p-value*
	Tennis	Badminton	
Overall	4.59 (0.94)	4.69 (0.77)	0.58
Male	4.67 (0.96)	4.77 (0.75)	0.00
Female	4.39 (0.89)	4.38 (0.79)	0.00

(*P<0.05)

Table 5 reveal that trait self-confidence is higher contributed by badminton athletes with mean 4.69 compare to tennis athletes with mean 4.59. Meanwhile, trait in tennis athletes for male athletes is lower that is 4.67 compared to badminton athletes that is 4.77. For female athletes in tennis are 4.39 higher than 4.38 in badminton athletes. The p-value for this variable of self-confidence is greater than 0.05. so there is no significantly different in terms of the level of trait self-confidence between wheelchairs tennis and wheelchair badminton athletes.

Table 6: The Differences in the Level of State Self-Confidence among Wheelchairs Badminton Athletes and Wheelchairs Tennis

Variable	Mean (SD) self confidence		p-value*
	Tennis	Badminton	
Overall	7.20 (0.62)	7.12 (0.42)	0.42
Male	7.15 (0.62)	7.08 (0.43)	0.00
Female	7.31 (0.63)	7.27 (0.39)	0.00

(*P<0.05)

Table 6 reveal the wheelchair tennis athletes is more contribute to state self-confidence (7.20) compare to badminton athletes (7.12). Meanwhile, state in tennis athletes for male is

higher (7.15) compared to badminton athletes (7.08). For female in tennis (7.31) higher than in badminton athletes (7.27). The p-value for this variable of self-confidence is greater than 0.05 therefore is not significantly different in terms of the level of state self-confidence between wheelchairs tennis and wheelchair badminton athletes.

DISCUSSION

The Level of Trait Self-Confidence and State Self-Confidence among Wheelchairs Tennis Athletes

There are no differences in the level of self-confidence before and after the competition to each of wheelchair tennis athletes. Most probably it is because of the environmental factors that occurred. Environment factors refers to the degree of comfort with the playing venue and being at ease with the officials presiding over the contest (Karageorghis & Terry, 2010). Athletes more comfortable and enjoying the game after played a few games, may be due to athletes' able to adapt with the environment. Moreover, some of the athletes has played numerous times at certain court. This makes them feel at ease prior to competition.

The Level of Trait Self-Confidence and State Self-Confidence among Wheelchairs Badminton Athletes

There are no differences in the level of trait and state self-confidence among wheelchairs badminton athletes. Wheelchair badminton athletes compete for the match is fewer during the championship. There are less professional athletes take part in the championship because, majority of the athletes are in regional level only. But they want to compete in a competitive game. This makes athletes feel more comfortable as they can compete with the athlete who is same level with them. Moreover, among wheelchair badminton athletes, they accomplished their performance and feeling of motivated. Wheelchair badminton athletes boost their self-confidence after the game because they perform successfully on the competitions.

The Differences between Trait Self Confidence among Wheelchair Tennis Athletes and Wheelchair Badminton Athletes

There are no differences in the level of trait sport-confidence between wheelchair tennis athletes and wheelchair badminton athletes. The levels of trait self-confidence might be influence by less vicarious experience among different types of wheelchair sport. Wheelchair tennis players are exposed to international competitions compared to wheelchair badminton athletes. Wheelchair tennis athletes might feel a little anxious and nervous because they are having an international competition. Thus, majority of participants are still low in ranking of achievements because they not see other athletes perform successfully. The trait self-confidence also may be influence by anxiety aspects. Study on the relationship between self-confidence, mood state, and anxiety among collegiate tennis player has found that winning athletes have higher levels of self-confidence and they demonstrate less negative expectations and concern about performance (Covassin & Pero, 2004). Meanwhile, the losing team may experience higher arousal and anxiety level that contribute to their bad performances.

The Differences between State Self Confidence among Wheelchair Tennis Athletes and Wheelchair Badminton Athletes

There was no differences between wheelchair tennis athletes and wheelchair badminton athletes. Their stable emotional states may influence self-confidence level. They control their emotional states through thoughts and emotions. In a study by Macdougall et al. (2015), they comparing the well-being of Para and Olympic Sport Athletes. The main findings indicated that, Para athletes have greater mastery oriented motivational-climate perceptions and lower levels of self-acceptance. Besides that, the state self-confidence among the athletes also influence by coaching style from the coach. After the competition, coach has to play roles professionally by comforting, the athletes who seem less motivated and encouraging those more. Coach need to give positive feedback in order to increase self-confidence of their athletes. This reason is supported by Kenow and Williams (1992), on their study of relationship between anxiety, self-confidence, and evaluation of coaching behaviors as it states that athletes low in self-confidence tend to perceive coaching behaviors more negatively. Muraki, Tsunawake, Hiramatsu, and Yamasaki (2000) examined the influence of quadriplegia versus paraplegia, activity level, and type of sport on mental health. The most active participants, who practiced three or more times

per week, scored lowest on depression, state and trait anxiety, tension, anger, fatigue, and confusion and scored highest on vigour independent from type of impairment or sport. The activities in which athletes participated included wheelchair basketball, wheelchair racing, and wheelchair tennis, among others. Even In 2008, Stănescu et al. showed that people with disabilities expressed a positive sense of self, describing themselves in sports context as communicative, friendly, optimistic, tolerant and confident. They are focused more on their physical disability and consequently, most of them hope to obtain more strength, during the practicing of physical exercise. The awareness and confidence that persons with disabilities gain through sport are often the impetus for engaging in advocacy work, as the communication, leadership and teamwork skills they develop are easily transferred into this new arena.

CONCLUSION

Self-confidence also may influence the athletes in others sources. According to Kingston, Lane, and Thomas (2010), contribution of self-confidence influenced by mastery, physical self-persuasion, social support, environmental comfort and coach's leadership. In a study of Sources Of Sport Confidence Of Student Athletes With Disabilities conducted by Sampan and Gomez (2015), majority of the athletes with disabilities find source of their sport confidence from the coach's leadership, environmental comfort and social support. Coaches also will benefit from the study when they coaching their athletes during training and especially competition.

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