

# Systematic Analysis on Psychological Skills Affecting the Performance of Para Athletes

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**Abstract:-** The review summarises the literature on the mental health (psychological skills) of Para athletes. There have been various studies done on the hindrances that occur due to the athlete's physical disability for Para athletes but there has been very limited research done on how the psychological skills affect their performance and what can be done to improve them. This article would help in exploring paucity in this area of research and take in suggested directions for future research. A systematic search of Research gate, PubMed, Journal of Exercise Rehabilitation, was done using the search terms such as mental health of Paralympics, Psychological skills, Sports performance enhancement, Para-athletes. A total of 162 articles seemed to be relevant at the initial screening out of which 45 articles addressed the Paralympics and psychology specifically published from 2004 to 2020. Most of the studies reviewed were done on a small scale mostly using tools that were either not standardised or only consisting of few parameters such as 4 to 5. There is a need for inquiry and further research in finding the psychological skills needed for enhancement in sports performance, how to coach these athletes so they can imply it in their daily practice and routine and psychological health of Para-athletes.

**Keywords:-** Mental Health of Para-Athletes, Psychological Skills, Para-Athletes, Sports Performance Enhancement.

## I. INTRODUCTION

Paralympics is an international sports event which is for athletes from all over the world with a wide range of disabilities. These Paralympic games are governed by the IPC (International Paralympic Committee). The participation and success of para-athletes have significantly increased in the past few years especially in India. Paralympics started in 1960, since then the number of athletes participating in the Paralympics has increased drastically, from 400 athletes representing 23 countries at the first Paralympic Games in Rome to approximately 4,000 athletes from 146 countries at the 2008 Summer Paralympic Games in Beijing (International Paralympic Committee, 2009). There was also an increase in participation, improvised training and importance given to para-athletes after the success achieved in Rio Olympics 2016 (Indu Mazumdar, 2020). The studies have represented very limited data regarding the psychological skills of disabled individuals in any physical activity and revealed that

disabled individuals participate more in physical activities when compared with able-bodied individuals (Walsh, 2018). The popularity and the awareness of para-sports seem to grow a lot, one of the main reason being engagement of disabled people into sports, as it would improve their physical and mental health as a whole, allowing them to socialise better which in turn would give them a positive mental health and social outlook (Torralba Jordán, 2017).

In each country and culture disability is treated differently so it affects the participation of athletes who are capable also. Participation and achievements of these para-athletes encourage further participation by others by making them see the ability in the disability of a person (Misener, 2013). Para athletes usually tend to have high intrinsic motivation (Banack, 2011) Despite the efforts taken by the government of India there is still a lot of disabled population who are interested in sports but take a step back. There are various situations that para-athletes need to constantly deal with such as sports overuse, risk behaviour, functional limitations, psychological stressors, the normalised pain, health hazards, individual possibilities to prevent sports-related injuries and unequal prerequisites (Fagher K., 2016). So there is a need for psychological skills training for the athletes who are taking part in para-sports to improve their performance and to encourage more participants to take part.

### *Psychological skills*

“Psychological skills training (PST) refers to the systematic and consistent practice of mental or psychological skills to enhance performance, increase enjoyment, or achieving greater sport and physical activity self-satisfaction” (Weinberg RS, 2007). It is important to educate an athlete on the importance of psychological skill training for performance enhancement. Only when the athlete has an interest and understands that it is important for the play they will learn and imply these skills better. Even though there is a lot of physical practice and hard work being done it is equally important to have good mental skills for optimal performance incorporated into everyday practice and training sessions (Dominteanu, 2017).

### *Need for psychological skills for para-athletes*

There are various studies related to the importance of physical and mental training for athletes (Omar-fauzee, 2010) (Hanton, 2012) (Allan, 2018) (Holmes, 2008) (Lim, 2018) (Brown, 2017) but there is a paucity in research done on psychological skill training for para-athletes (Lim, 2018). It is essential to train the athletes with the psychological

skills to perform at their full potential and prepare better for settings that are psychologically challenging (Mesagno, 2008). There are numerous studies done focusing on para-athletes with intellectual disability and not on athletes with various other disabilities (Gorely T, 2012). Para-athletes have a very high level of competitive psychological and physical desire to achieve in their sport (Omar-fauzee, 2010). Yet there is a greater level of challenges and stress other than playing the match itself which the para-athletes undergo such as:

- a) Difficulty in travelling as their travel time is extended more than the others causing stress as they board the vehicle first and exit last plus the travel time (Hanton, 2012)
- b) shifting from seat to wheelchair and back often, restroom usage during the long travel and at the competition arena (Martin, 1996),
- c) difficulty of being away from home and social support for a long time which would have a negative impact on performance (Omar-fauzee, 2010)
- d) Stress due to misclassification of their disability either with an athlete with a higher or lower level of disability which would affect their performance. (Martin, 1996)

For para-athletes to face such challenges and reach their goal despite all the socio-cultural pressure putting them down, causing decreased sport participation, they need to have good psychological skills to cope with all the stressors.

The Paralympic Games are conducted involving the competition among a wide range of disabled individuals where, understanding the psychological aspects of these Para sport athletes for performing well in their sports (Allan, 2018) becomes important. A lot of emphases should be given to the psychological health of the para-athletes equal to the amount of importance given to their physical health as their physical dependence on someone for their requirements also needs some mental skills to cope (Van de Vliet, 2012).

Clough defines mental toughness as “the capacity of an individual to deal effectively with stressors, pressures and challenges, and perform to the best of their ability, irrespective of the circumstances in which they find themselves” (Sorensen, 2016). It is very important to understand and have a good level of mental toughness for any athlete which would help in their performance enhancement (Singh., 2017). observed through the studies that certain psychological aspects affect the athlete’s performance when the competition gets challenging. Athletes can bring up the game to the highest level even at a tough point if they have mental toughness (Crust, 2005) which not only increases their ability to concentrate under pressure but also helps with the necessary focus on the goal. There is also a considerable amount of research done that says that mental toughness is one of the most important skills an athlete should have such that it can determine the success of that athlete or the way they would perform (Liew, 2019).

Imagery, in the context of sport, may be considered as the neural generation or regeneration of parts of a brain representation/neural network involving primarily top-down

sensorial, perceptual and affective characteristics, that are primarily under the conscious control of the imager and which may occur in the absence of perceptual afference functionally equivalent to the actual sporting experience (Holmes, 2008). The imagery was known to be the most used mental skill training technique by the coaches as they felt that was very useful for athlete’s performance enhancement. Out of the other theories on how mental imagery works in sports, psych neuromuscular which is muscle memory, symbolic learning theory which is the mental blueprint and bioinformatic theory is known to be the most important of all others (Amasiatu, 2013).

Talking or instructing oneself during a competition or match is called self-talk. Self-talk is generally known as self-communication which a person uses in any situation. It can be negative or positive self-talk based on the situation which can sometimes turn into belief (Paul Holmes, 2008). It has been seen during competition player talks to him/herself to motivate or scold. In sport psychology, researchers and practitioners started researching self-talk after the cognitive revolution in the 1970s (Kokun, 2020). There are different types of self-talk such as instructional and motivational which are effective based on the task to be performed. A task that required an athlete’s attention to do precisely was done better with instructional self-talk. Whereas, a task that needed athletes to have a good level of strength and endurance would require these athletes to be trained in motivational self-talk to be beneficial (Hatzigeorgiadis, 2006).

The strength of an athlete’s desire to achieve a goal is understood to be motivation and the need that requires satisfaction. It is the reason for a para-athletes effort to practice and attain their goals. Only if the athlete is motivated, they would put in the effort to achieve and show enhanced performance without which all the other mental components such as focus, confidence, intensity and emotions would be of no use. In sports, motivation is very important because only if the athletes are motivated towards a goal, they will work hard and endure pain, fatigue and injury (Girish, 2019). Successful athletes usually tend to show high intrinsic and extrinsic motivation. But when compared to able athletes, para-athletes were driven more by intrinsic motivation than extrinsic to perform (Szemes, 2017). There is a great need for every athlete to be motivated to achieve and especially intrinsic motivation is comparatively more important than extrinsic motivation for an athlete to perform better (Balyi, 2013).

#### *Importance in India*

India is a sport-loving country with different sports cultures, but mental toughness training which is essential for optimising the performance is not given much importance (Joshi, 2020). There is a need for research on psychological skills and how to enhance the mental ability of Para athletes, especially in India as we are emerging in Paralympics at the global level (Harada, 2011).

The Paraspport athletes do not find themselves lesser in any physical aspect when compared with the performance of the able-bodied athletes. The enhancement of cognitive and psychological skills among sports athletes has added value to their well-being and athlete performance (Allan, 2018).

There is a greater need in India for awareness that mental skill training is used to enhance performance and a sports psychologist can be approached just for performance enhancement rather than only when there is a mental problem or psychopathology. Despite the awareness of the importance of psychological skill training for better performance some of the athletes and coaches are hesitant as they feel it would create a negative image on them (Sridhar, 2010).

**II. METHOD**

*Search Strategies*

Two search strategies were used: An electronic search into ResearchGate, Khel journal, PubMed, Journal of exercise rehabilitation, ScienceDirect for articles on psychological skills in para-athletes and their effect on their sports performance. A manual search was conducted with the help of the following books and journals: Applied Sport

Psychology, Disability Sport, Clinical Sport Psychology and Handbook of sport Psychology. Data from these sources were referred to and tabulated.

*Inclusion/Exclusion Criteria*

For studies to be included In this review they were: a) Research, review and viewpoint articles, b)article that consists of research studies done on athletes only with physical disabilities, c)Studies consisting of both male and female para-athletes were considered, d)Participants of all the studies were in the range of 15 to 55, e)Both qualitative, quantitative and mixed analysis articles were included, f)Each study consists of the use of psychological or mental skills for performance enhancement and some studies show the importance of these skills in performance enhancement of para-athletes. A few other studies show its growth and importance in India, g) To have recent and updated data showing the importance of mental skills for para-athletes as sports psychology is given more importance now than previous years, articles only beyond the year 2008 were considered. Studies were excluded from this review if a) Para athletes with any kind of mental disability were part of the sample, b) no clear specification if the athlete’s performance was enhanced due to physical or mental training.

**III. RESULTS**

*Study Selection*

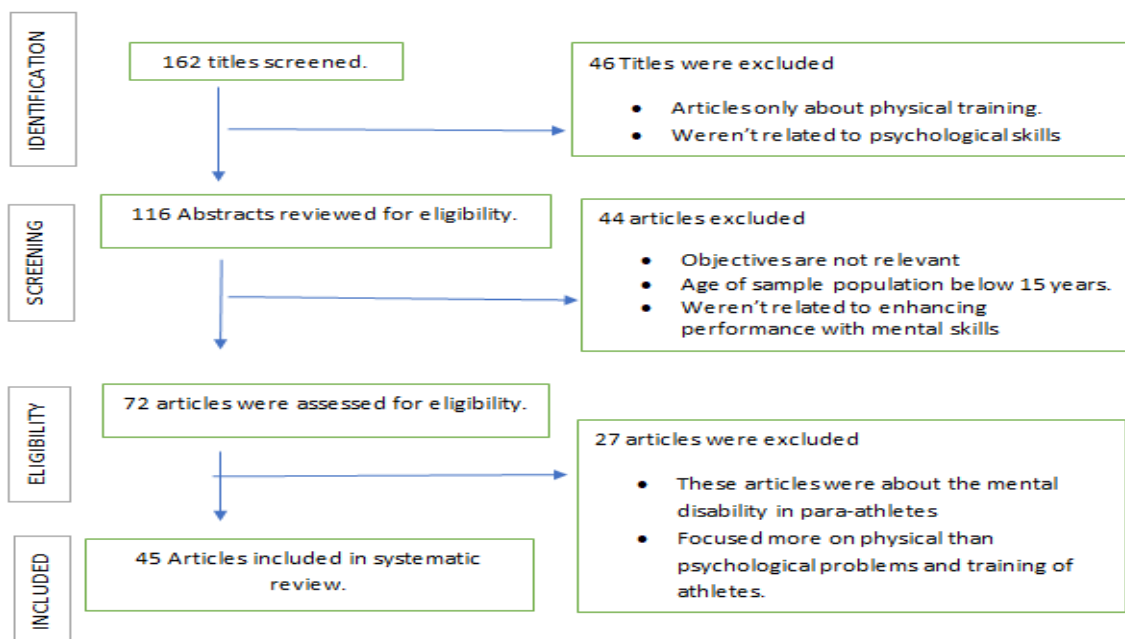


Fig 1

A total of 162 articles were screened from ResearchGate, PubMed, Journal of exercise rehabilitation, ScienceDirect and various other search engines. Of these articles, 46 titles were excluded as they weren’t related to psychological skills and included athletes with a mental disability which are irrelevant to this systematic review. From Fig 1 after this level of screening a total number of 45 articles was included in this review article.

The majority of studies were cross-sectional and purposive sampling. Most of them were of quantitative design (n=31), though there were some qualitative investigations (n=14). The studies differed in sample size, ranging from 3 to 120 participants. There are different areas into which the identified literature was grouped. These consist of 1) mental toughness, 2) motivations 3) Self-talk 4) mental imagery 5) coping with stress 6) Psychological skills

in para-athletes 7) Awareness of skills 8) Willingness to getting trained in psychological skills.

There were various questionnaires used to test the psychological skill of the athletes. Achievement motivation scale was used in certain research articles to find the relationship between sports result and pre-competition mental state (Koper, 2020) Competitive state anxiety Inventory 2 CSAI-2 was used to measure cognitive anxiety, somatic anxiety and state of self-confidence, Athletic Coping Skill Inventory-28 (ACSI-28) was used to measure the athletes coping skills before and during the competition (Szajer, 2019) where it was found that female Para-swimmers scored lower than able-bodied female swimmers on self-confidence, somatic anxiety, freedom from worry, and self-confidence/achievement motivation. There was a study done where the mental state was assessed of para-athletes to know the relationship between the pre-competition mental state and the results of the competition. Purposive sampling was done using a scale such as Self-efficacy for sports activity scale, Achievement motivation scale (AMS), State trait anxiety inventory (STAI) (Koper M. &, 2020). An improvement was seen on cognitive, emotional variables in the para-athletes after the intervention was done after testing. To know the level of psychological skill usage assessment was done using the Test of performance scale (TOPS) and it was obtained that para-athletes (sitting volleyball) players scored better in self-talk, goal setting, imagery and relaxation when compared to the able athletes in both practice and competition (Esatbeyoglu, 2018). Three national table tennis players were interviewed and tested using TOPS (Test of performance scale) to assess the effects of psychological skill training which increased their level of performance, but these results could not be generalized as this study used only three samples and para-athletes were all of the same disability (Lim, 2018). The para-athletes face challenges such as the inability to deal with pressure, lack of concentration due to increased physical and mental stress. Each athlete used their technique to increase their mental strength based on their understanding which was clear after the interview as 26 of 100 athletes considered trusting or believing in self as an important aspect of mental strength and the next 25 athletes thought staying focused was an essential part of it. Many athletes were not aware of mental strength as a skill to be learnt rather they felt it was just a belief. There is a need for athletes as well as coaches to be aware of the positive impact mental strength has on performance (Joshi, 2020).

#### *Mental Toughness*

After testing with the Mental toughness inventory, it was found that the level of mental toughness increased as the years of experience was more in a sport as well as the athletes age increased. It was also found that mental toughness can be studied both ways as elite athletes showed a higher level of mental toughness and resilience and it was also obtained that athlete who had a high level of mental toughness would have enhanced performance (Mendez-Alonso, Prieto-Saborit, Bahamonde, & Jimenez-Arberas, 2021). A higher level of mental toughness was associated with a greater likelihood of winning ( $r = .52, p < .01$ ) also

chances of scoring consecutive points or winning was more ( $r = .39, p < .01$ ) (RG., 2016).

#### *Imagery*

Even visual impairment does not become a barrier for psychological skills such as mental imagery which improved the performance of six goalball athletes after they were interviewed (Eddy, 2013). Another six-goalball female visually impaired athletes were given intervention for 6 months on mental imagery skills where they won the match and qualified to the next level as they felt they understood each other and communicated better which helped them in enhancing their performance (Larsen, 2014). Performance anxiety was also reduced with the use of imagery (Brown, 2017). It was also known to positively influence the level of motivation and didn't show any significant difference between the early and late blinded athletes as they only differed in the techniques, they used to imagine the coordinates (Vanlierde A, 2004).

#### *Self-talk*

When para-athletes are given Intervention on self-talk it was effective on their performance and has enhanced the performance of the athletes when properly designed, administered and trained (Hatzigeorgiadis A. Z., 2005). Self-talk cues were used while performing a task ( $M = 5.95$  and  $6.12$ ) for instructional and motivational self-talk cues, respectively; range from 4.00 to 7.00 for both instructional and motivational Self-talk). Self-talk helped in the reduction of the occurrence of interfering thoughts, enhancing concentration on the task and overall enhancing sports performance (Hatzigeorgiadis A. Z., 2005).

#### *Motivation*

Sports Motivation Scale (SMS 6) was used to measure the motivation level difference between able and para-athletes where there is no statistical significance between able athletes and differently-abled athletes concerning motivation and its domains, except for Identified Regulation. As the value for Identified Regulation,  $t = -2.393$  ( $p < 0.05$ ), is statistically significant at 95% level of confidence. It can be understood that there is a higher level of motivation in para-athletes who have identified and accepted their disability (Girish, 2019).

The psychological skills of para-athletes and able-bodied athletes do not have much difference and is known to be very similar, which in turn can be understood that sports have a positive impact on the para-athletes physically which keeps them impair with the able athletes (Ljubica Bacanac1). It's proven that para-athletes who take part in sports would also have a positive effect on the overall quality of their own life (Bolach, 2014). The learning process and motor skills of the athletes are enhanced with the help of psychological and cognitive skills which in turn helped the athletes in handling the competitive pressure (McCarthy, 2010). When the athletes are trained on their psychological skills, they would imply it in their training and competition phase which would show improved performance. So, if these psychological skills are learnt and practised well during the training session it would be more

helpful for the athletes during the competition in showing the enhanced performance (Abou Elmagd, 2016).

#### IV. DISCUSSION

For an athlete to reach their optimal performance or practice to their best capacity as well as gain pleasure from that activity despite all the challenges they face, it's important for these athletes to need to be psychologically strong. Most of the athletes are not provided with or encouraged to take up psychological skills training during their practice. So, the para-athletes completely depend on their innate psychological skills to cope with any situation where a few athletes are good at it. Most of the para-athletes tend to harm their performance due to the lack of these skills and the support it provides. During a competition or for practice there is a need for the presence of strong psychological skills in the athletes to face the challenges they come across. Especially, when para-athletes are considered, there is a greater need to be trained on their psychological skills along with their physical training as their level of challenges faced are even higher when compared to able athletes.

Para athletes face challenges right from the beginning of participation in any sport and even after they've reached the elite level. There are various situations that they find difficult to cope with such as longer travel time than the other athletes, more physical exertion during practice even if it's with aid, more proneness to injury and fear, being dependent on someone for their needs. These cause the para-athletes stress and anxiety even before the competition which can hamper their performance for which they need some psychological training to cope with it. And just before the competition or during it they need to be trained on their psychological skills such as mental imagery, peaking under pressure, coping with stress, quick decision making, mental toughness, self-talk and various others which would not only help them in enhancing their performance but also practice for a longer time effectively. From the literature, it is known that despite all these challenges and stress faced by the para-athletes they still tend to participate more in sports competitions due to the pleasurable experiences gained from it such as social acceptance, improved self-image, acceptance and close friendship which improves their outlook on life. So, to have more para-athletes take part in sports which would, in turn, improve their entire outlook on self and the world, there is a need for psychological skill training which would help them cope with the stress and challenges they face as it would decrease the number of dropouts and increase participation. There is also a greater need for these skills as it would help in recovering from injury and the mental stress caused by it and in the rehabilitation of an athlete where they would get back to the competition quickly as their recovery time has reduced.

The findings suggest that psychological skills have a major impact on the performance of para-athletes, yet not much research is done as to how these skills can be further tested and enhanced in the athletes. It is important for the coaches also to be aware of how to test the athletes and

know what skill is lacking so they could work in collaboration with a sports psychologist to train the athlete better on these skills that would enhance their performance. Since the para-athletes are increasing in number now than before there is a need to emphasise more on training athletes on psychological skills on par with physical training that would enhance their performance and also help them cope with the challenges they face.

Training on the psychological skills is necessary not only for the beginner level athlete but also for a Paralympian at the highest level of competition because athletes always go through a certain amount of stress during practice and competition. It is also needed to have better focus, coping concentration, resilience and enhanced performance. Despite all the advancements and awareness that's created on the importance of psychological skills, many athletes are still trained physically and no mental training is given. This happens to athletes due to a lack of awareness of its importance or because of the choice they make as the athletes believe psychological skills are only for para-athletes who need psychological assistance rather than for a general performance enhancement. So, for performance enhancement, this culture has to change where both physical and psychological training is given equal importance.

#### REFERENCES

- [1]. Abou Elmagd, M. (2016). General psychological factors affecting physical performance and sports. *International Journal of Physical Education, Sports, and Health*, 3(5), 255-264.
- [2]. Allan, V., Smith, B., Côté, J., Ginis, K. A. M., & Latimer-Cheung, A. E. (2018). Narratives of participation among individuals with physical disabilities: A life-course analysis of athletes' experiences and development in parasport. *Psychology of Sport and Exercise*, 37, 170-178.
- [3]. Amasiatu, A.N. (2013). MENTAL IMAGERY REHEARSAL IS A PSYCHOLOGICAL TECHNIQUE TO ENHANCING SPORTS PERFORMANCE.
- [4]. Aryan Joshi (2020). A Study on Mental Strength Among Popular Athletes and Para-athletes.
- [5]. Banack, H.R., Sabiston, C.M., & Bloom, G.A. (2011). Coach Autonomy Support, Basic Need Satisfaction, and Intrinsic Motivation of Paralympic Athletes. *Res Q Exercise Sport*, 82 (4), 722-730. <https://doi.org/10.1080/02701367.2011.10599809>
- [6]. Balyi, I., Way, R., & Higgs, C. (2013): Long term athlete development. *Human Kinetics*, Champaign, IL.
- [7]. Bolach, B., & Prystupa, T. (2014). Evaluation of perception of quality of life of disabled athletes. *Physical Education of Students*, 18(1), 13-16. <https://doi.org/10.6084/m9.figshare.903687>
- [8]. Brown, Daniel & Fletcher, David. (2017). Effects of Psychological and Psychosocial Interventions on Sports Performance: A Meta-Analysis. *Sports Medicine*. 47. 77-99. 10.1007/s40279-016-0552-7.

- [9]. Cowden RG. Competitive Performance Correlates of Mental Toughness in Tennis: A Preliminary Analysis. *Percept Mot Skills*. 2016 Aug;123(1):341-60. DOI: 10.1177/0031512516659902. PMID: 27502244.
- [10]. Crust, Lee & Clough, Peter. (2005). Relationship between Mental Toughness and Physical Endurance. *Perceptual and motor skills*. 100. 192-4. 10.2466/PMS.100.1.192-194.
- [11]. Dominteanu, Teodora. (2017). The Role of Psychological Preparation in the Performance Sports Activity. *Moldavian Journal for Education and Social Psychology*. 1. 7-13. 10.18662/mjesp/2017.0101.01.
- [12]. Eddy, Kate & Mellalieu, Stephen. (2003). Mental Imagery in Athletes with Visual Impairments. *Adapted Physical Activity Quarterly*. 20. 347-368. 10.1123/apaq.20.4.347.
- [13]. Esatbeyoglu, Ferhat & Campbell, Mark. (2018). Mental Skill Usage of Athletes with Physical Disabilities. *Turkish Journal of Sport and Exercise*. 27-38. 10.15314/tjed.368137.
- [14]. Fagher K., Forsberg A., Jacobsson J., Timpka T., Dahlström Ö, Lexell J. (2016). Paralympic athletes' perceptions of their experiences of sports-related injuries, risk factors and preventive possibilities. *Eur. J. Sport Sci*. 16 1240–1249. 10.1080/17461391.2016.1192689
- [15]. Girish, R., & Periasamy, A. (2019). A comparative study on motivation between differently-abled and abled athletes.
- [16]. Gorely T, Jobling A, Lewis K, Bruce D. An evaluative case study of a psychological skills training program for athletes with intellectual disabilities. *Adapt Phys Active Q* 2002;19:350-363
- [17]. Hanton, Sheldon & Wagstaff, Christopher & Fletcher, David. (2012). Cognitive appraisal of stressors encountered in sport organizations. *International Journal of Sport and Exercise Psychology*. 10. 276-289. 10.1080/1612197X.2012.682376.
- [18]. Harada, C. M., Siperstein, G. N., Parker, R. C., & Lenox, D. (2011). Promoting social inclusion for people with intellectual disabilities through sport: Special Olympics International, global sports initiatives and strategies. *Sport in Society*, 14(9), 1131-1148.
- [19]. Hatzigeorgiadis, A., Zourbanos, N., & Theodorakis, Y. (2005). Self-Talk: It works, but how? II. An investigation on self-talk functions.
- [20]. Hatzigeorgiadis, Antonis. (2006). Instructional and motivational self-talk: An investigation on perceived self-talk functions. *Hellenic Journal of Psychology*. 3. 164-175.
- [21]. Holmes, P. S., & Calmels, C. (2008). A neuroscientific review of imagery and observation use in sport. *Journal of Motor Behavior*, 40, 433–445.
- [22]. Indu Mazumdar, Dr. Chetna Chaudhary. Challenges and Opportunities at Paralympics. *Int J Yogic Hum Mov Sports Sciences* 2020;5(2):27-30
- [23]. Kokun, Oleg & Serdiuk, Liudmyla & Shamykh, Oleksandr. (2020). Personal characteristics supporting Paralympic athletes' self-realization in sports. *Journal of Human Sport and Exercise*. 16. 10.14198/jhse.2021.162.17.
- [24]. Koper, Magdalena & Nadolska, Anna & Urbański, Piotr & Wilski, Maciej. (2020). Relationship between Pre-Competition Mental State and Sport Result of Disabled Boccia Athletes. *International Journal of Environmental Research and Public Health*. 17. 8232. 10.3390/ijerph17218232.
- [25]. Larsen, Carsten Hvid. (2014). Preparing for the European Championships: A Six-step Mental Skills Training Program in Disability Sports. *Journal of sport psychology in action*. 10.1080/21520704.2014.971989.
- [26]. Liew, G., Kuan G., Chin. N., Hashim H. (2019). Mental toughness in sport. Systematic review and future. *German Journal of Exercise and Sport Research*, 49:381–394. <https://doi.org/10.1007/s12662-019-00603-3>.
- [27]. Lim, Tae-Hee & Jang, Chang-Yong & O'Sullivan, David & Oh, Hyunkyung. (2018). Applications of psychological skills training for Paralympic table tennis athletes. *Journal of Exercise Rehabilitation*. 14. 367-374. 10.12965/jer.1836198.099.
- [28]. Ljubica Bačanač1, Bojana Miličević-Marinković2, Goran Kasum3, Marjan Marinković, COMPETITIVE ANXIETY, SELF-CONFIDENCE AND PSYCHOLOGICAL SKILLS IN TOP ATHLETES WITH AND WITHOUT DISABILITIES: A PILOT STUDY UDC 796:159.922.73.
- [29]. Martin, Jeffrey & Mushett-Adams, J.. (1996). Social Support Mechanisms among Athletes with Disabilities. *Adapted physical activity quarterly: APAQ*. 13. 74-83.
- [30]. McCarthy, P. J., Jones, M. V., Harwood, C. G., & Olivier, S. (2010). What do young athletes implicitly understand about psychological skills?. *Journal of Clinical Sport Psychology*, 4(2), 158-172.
- [31]. Méndez-Alonso, D.; Prieto-Saborit, J.A.; Bahamonde, J.R.; Jiménez-Arberás, E. Influence of Psychological Factors on the Success of the Ultra-Trail Runner. *Int. J. Environ. Res. Public Health* 2021, 18, 2704. <https://doi.org/10.3390/ijerph18052704>.
- [32]. Misener, Laura & Darcy, Simon & Legg, David & Gilbert, Keith. (2013). Beyond Olympic Legacy: Understanding Paralympic Legacy Through a Thematic Analysis. *Journal of Sport Management*. 27. 329-341. 10.1123/jsm.27.4.329.
- [33]. Mesagno, Christopher & Marchant, Daryl & Morris, Tony. (2008). A Pre-Performance Routine to Alleviate Choking in "Choking-Susceptible" Athletes. *Sport Psychologist*. 22. 10.1123/tsp.22.4.439.
- [34]. Omar-fauzee, Mohd sofian & Mohd. Ali, Manisah & Soh, Kim & Norazillah, Ibrahim. (2010). Participation Motive in the Paralympics. *Journal of Alternative Perspectives in the Social Sciences*. 1.
- [35]. Paul Holmes, Claire Calmels. A Neuroscientific Review of Imagery and Observation Use in Sport. *Journal of Motor Behaviour*, Taylor & Francis (Routledge), 2008, 40 (5), pp.433-445. ff10.3200/JMBR.40.5.433-445ff. ffhal-01576439f.

- [36]. Sorensen, S. , Schofield, G. and Jarden, A. (2016). A Systems-Approach Model of Mental Toughness: Understanding Inputs, Processes and Outputs. *Psychology*, 7, 1402-1423. DOI: 10.4236/psych.2016.712141
- [37]. Sridhar, Chaitanya. (2010). Sports psychology in India. *British Journal of Sports Medicine - BRIT J SPORTS MED.* 44. 10.1136/bjism.2010.078725.190.
- [38]. Szemes, Ágnes & Szájer, Péter & Toth, Laszlo. (2017). Sport motivation and perceived motivational climate among members of a national para-swimming team. *Cognition, Brain, Behavior. An Interdisciplinary Journal.* 21. 307-319. 10.24193/cbb.2017.21.19.
- [39]. Szájer, Péter & Toth, Laszlo & Szemes, Ágnes & Nagy, Nikoletta & Zala, Borbala & Kőteles, Ferenc & Szabo, Attila. (2019). A comparative analysis of national Olympic swimming team members' and para-swimming team members' psychological profiles. 23. 299-311. 10.24193/cbb.2019.23.17.
- [40]. Torralba Jordán, M., Vieira, M., & Rubio, M. (2017). Motives for the practicing sports of Spanish Paralympic athletes. *Revista De Psicología Del Deporte*, 26(1), 49-60.
- [41]. Van de Vliet, P. (2012). Paralympic athlete's health. *British Journal of Sports Medicine*, 46, 458-459.
- [42]. Vanlierde A, Wanet-Defalque MC. Abilities and strategies of blind and sighted subjects in visuo-spatial imagery. *Acta Psychol (Amst)*. 2004 Jun;116(2):205-22. doi: 10.1016/j.actpsy.2004.03.001. PMID: 15158183.
- [43]. Vijender Rathi and Dr. Poonam Singh. *International Journal of Physical Education, Sports and Health* 2017; 4(3): 217-220
- [44]. Walsh, D., Belton, S., Meegan, S., Bowers, K., Corby, D., Staines, A., ... & Sweeney, M. R. (2018). A comparison of physical activity, physical fitness levels, BMI and blood pressure of adults with intellectual disability, who do and do not take part in Special Olympics Ireland programs: Results from the SOPHIE study. *Journal of Intellectual Disabilities*, 22(2), 154-170.
- [45]. Weinberg RS, Gould D. Foundations of sport and exercise psychology, 4th edn. Champaign, Illinois: Human Kinetics,2007