

EMPIRICAL STUDY ON MENTAL TOUGHNESS AMONG DIFFERENTLY ABLED ATHLETES IN MANIPUR

Sharina Naorem

¹Research Scholar, Department of Physical Education, Tripura University, INDIA

Sm Farooque

²Ph.D, Faculty, Department of Physical Education, Tripura University INDIA,

Sudip Das

³Professor, Department of Physical Education, Tripura University, INDIA

Corresponding Author: Sharina Naorem

Abstract

Received: 10th July, 2025

Revised & Accepted: 15th November, 2025

Published: 25th December, 2025

DOI: <https://doie.org/10.65985/AS.2026311217>

Background: Mental toughness (MT) helps athletes overcome adversity and perform better, but research on differently abled athletes remains limited. **Objectives:** Therefore, the study aims to assess the levels of mental toughness among differently abled athletes in Manipur, examining psychological dimensions including rebound-ability, the ability to handle pressure, concentration ability, confidence, and motivation. **Methods:** A total of 40 differently abled national-level athletes (both male and female, aged 18-30) were selected through purposive sampling. Participants completed a standardized mental toughness questionnaire. Descriptive statistics categorized MT levels, and a Kruskal-Wallis Test compared psychological dimensions. Pairwise comparisons were conducted using Bonferroni correction to adjust for multiple tests. **Results:** Findings show high motivation (4.88 ± 0.60) and confidence (4.88 ± 1.10), but moderate scores in rebound-ability (3.61 ± 1.26), handling pressure (3.76 ± 1.48), and concentration (3.71 ± 1.57), highlighting areas for improvement. The Kruskal-Wallis's test ($H = 38.493$, $p < 0.001$) confirmed significant differences, with confidence and motivation scoring significantly higher than rebound-ability and pressure-handling ($p < 0.001$). **Conclusion:** The study highlights strong motivation and confidence among differently abled athletes but identifies weaknesses in rebound-ability, concentration, and pressure management. The majority (73.17%) exhibited low mental toughness, necessitating structured psychological interventions focusing on resilience training, stress management, and attentional control. Future research should explore larger and more diverse samples, integrating objective measures to complement self-reported data. Implementing targeted mental skills programs can enhance the overall psychological resilience and performance of differently abled athletes.

Keywords: rebound-ability, the ability to handle pressure, concentration ability, confidence, and motivation

Introduction:

Mental Toughness (MT) is a key psychological variable related to perseverance and success in performance domain (Powell & Myers, 2017a). Mental Toughness (MT), which refers to an

inner focus and commitment to rise above challenges when facing adversity, is viewed as one of the most important psychological attributes in determining success in sport.

Mental toughness (MT) is a concept that describes an important personality trait which is difficult to assess, unlike the behavioural concepts with which we are all familiar, and also mental toughness measure ‘how we think’ rather than ‘how we act’ when things happen and it provides a capability to answer a substantial part of the question: ‘why do I respond the way I do to event?’. And we know the different people will often see the same situation in different way. Some see opportunity where others see threat. Some will see a desirable goal and work hard to achieve it, other won’t make the effort. The difference is in the mind, but often emerges as a behaviour or emotional.

Mental Toughness (MT) is a quality that seems to be easily recognized by fans, coaches and players, yet remains far more elusive conceptually, being described differently in different contexts (Powell & Myers, 2017b) with no agreed operational definition. Perhaps this is because mentally tough behaviours are more directly observable than the cognitions, attitudes, and affect that accompany such behaviour. Given the relationship between overcoming traumatic events and the ability to cope successfully with future stress, it may be beneficial for structured development programs to include deliberate challenges that require athletes to face and overcome difficult situations. Not surprisingly, studies specifically investigating MT in sport have predominantly focused on sport related trauma and challenge (Cowden et al., 2020).

One group of athletes that exemplify PTG is Paralympic athletes. Para-sport allows people with disabilities to achieve extraordinary heights of functional capability and in many ways has become an elite sport, with increased training intensity, sports performance and improved training methods. Paralympic athletes constantly have to deal with: sport overuse, risk behaviour, functional limitations, psychological stressors, normalized pain, health hazards, and unequal prerequisites (Fagher et al., 2016a) Relative to able-bodied athletes, very little is known about the mental skill use of Paralympic athletes, as the majority of research has been conducted with non-elite disability athletes (Fagher et al., 2016b). However, it has been reported that athletes with disabilities demonstrate stronger resiliency and self-efficacy skills than able-bodied athletes (Martin, 2008).

Perspectives taken from Paralympic athletes with varying injuries may provide an insight into the previously unidentified qualities and strategies. It can be assumed that athletes with disabilities have had to overcome more ‘trauma’ than non-disabled counterparts, particularly in their non-sporting life. Typically, research has compared athletes with disabilities to athletes without disabilities, and athletes with acquired disabilities to athletes with congenital disabilities (Dieffenbach & Statler, 2012). One rationale for these comparisons is that because many athletes with disabilities have experienced a major life trauma, they may differ from athletes without disabilities on various coping skills, mood states, or other important self-perceptions (Ferreira et al., 2024) found that athletes with disabilities report spending less time engaging in mental training and have fewer opportunities to formally learn mental skills. It is conceivable that the potential lack of learned mental skills means that athletes with disabilities may rely on mental skills developed without formal input to facilitate training and performance (Martin, 2015).

The purpose of the study is to investigate the mental toughness of Manipur's differently abled athletes, a province renowned for its vibrant sports culture and notable participation in both domestic and international competitions. A vital psychological quality that helps athletes endure, adjust, and perform well under duress is mental toughness. Although able-bodied athletes have been the subject of much research, little is known about the psychological

dynamics of differently-abled athletes, especially those from under-represented areas. Athletes with disabilities encounter particular difficulties, such as social disapproval, restricted access to resources, and physical limitations, all of which influence their mental toughness. According to earlier studies, athletes with impairments frequently rely on their own mental talents because they have fewer opportunity for formal mental training (Neves et al., 2022).

Manipur offers the perfect setting for researching this phenomenon because it is a centre for Indian sporting talent. The results can shed light on the ways in which personal, cultural, and environmental factors interact to influence the mental toughness of athletes with disabilities in this area. Furthermore, this research can help create customised interventions and support networks that promote psychological resilience, which will ultimately improve these athletes' performance and general well-being. This objective intends to close this gap and advance fairness and inclusivity in sports psychology practice and research.

Methodology:

Participants for this study were selected based on specific criteria identifying differently abled players from Manipur. The selection involved collaboration with sports associations, clubs, and relevant organizations to ensure representation across various sports disciplines and levels of ability. From Manipur, a total of 40 differently abled national players were chosen for the study. For the purposes of the study, both male and female players between the ages of 18 to 30 were included. Purposive sampling was used based on their participation and in compliance with the study's restricting parameters. Ethical approval was obtained from the appropriate institutional review boards. Informed consent forms were also prepared to ensure participants understood the study's purpose, procedures, confidentiality measures, and their rights before participation.

The total selected subjects [N=40] were provided with a selected questionnaire on Mental Toughness. The questionnaire was distributed personally to the selected subjects, and the researcher explained the set of questions to the subjects when needed, assuring them that their responses would be used solely for research purposes and kept confidential.

Statistical Analysis:

To assess the status of different dimensions of mental toughness among differently-abled players in Manipur, descriptive statistics were employed. As per the guidelines of the questionnaire, the levels of mental toughness in each dimension were categorized by summing the responses in each section. Additionally, to evaluate the significance of differences among groups, non-parametric statistics, specifically the Independent-Samples Kruskal-Wallis Test, were utilized. For further analysis, pairwise comparisons were conducted using the Bonferroni correction to control for multiple comparisons.

Result:

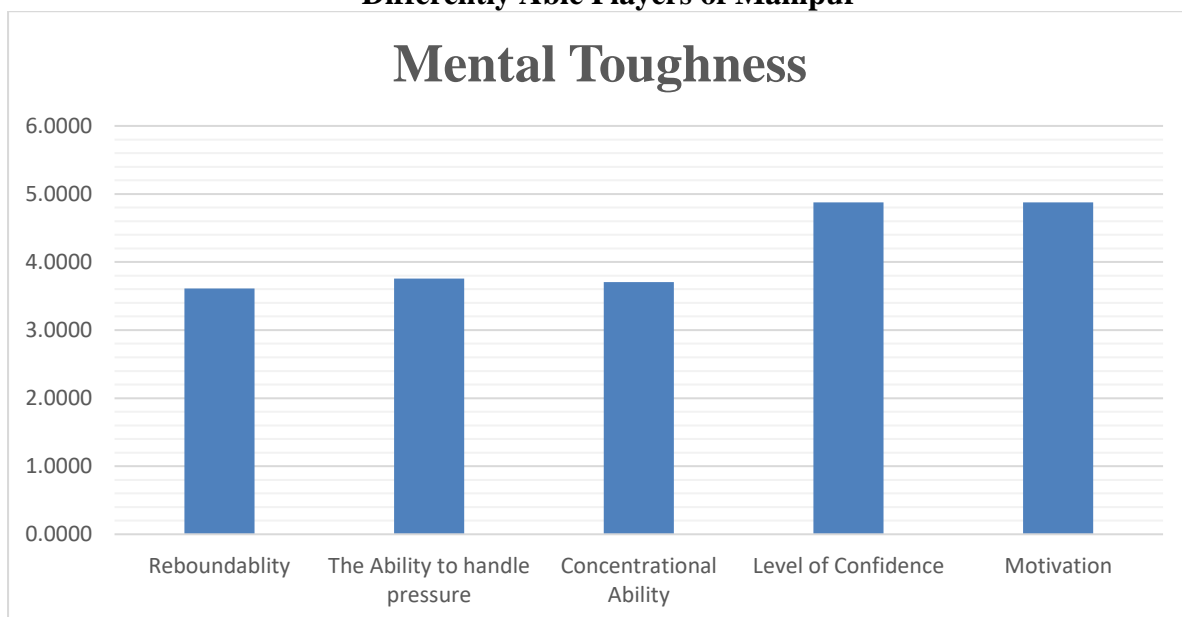
Table 1
Status on different dimension of Mental Toughness of differently able players of Manipur

Descriptive Statistics					
Variables	N	Minimum	Maximum	Mean	Std. Deviation
Rebound-ability	41.00	1.00	6.00	3.61	1.26

The Ability to handle pressure	41.00	1.00	6.00	3.76	1.48
Concentration Ability	41.00	0.00	6.00	3.71	1.57
Level of Confidence	41.00	2.00	6.00	4.88	1.10
Motivation	41.00	3.00	6.00	4.88	0.60

Table 1 presents the descriptive statistics for the psychological variables assessed in the study, including dimension of mental toughness that is Rebound-ability, The Ability to Handle Pressure, Concentration Ability, Level of Confidence, and Motivation. The variables were analysed across a sample of 41 participants. For Rebound-ability, the mean score was (3.61 ± 1.26) , with scores ranging from 1.00 to 6.00. This indicates a moderate ability to recover from setbacks, with some variability in the responses. Similarly, the Ability to Handle Pressure had a mean of (3.76 ± 1.48) , with scores also ranging from 1.00 to 6.00, reflecting moderate composure under pressure and slightly higher variability compared to Rebound-ability. Concentration Ability showed the widest range of scores, from 0.00 to 6.00, with a mean of (3.71 ± 1.57) . The minimum score of 0.00 suggests that a few participants struggled with focus, contributing to the high variability. In contrast, Level of Confidence had a higher and more consistent mean score of (4.88 ± 1.10) , with scores ranging from 2.00 to 6.00, indicating a generally high level of self-confidence. Similarly, Motivation also had a mean score of (4.88 ± 0.60) , with scores ranging from 3.00 to 6.00, reflecting consistently high levels of motivation with the least variability among the variables.

Figure 1
Graphical Representation on the Different Dimension of Mental Toughness of Differently Able Players of Manipur



The Fig. 1 presents the mean scores for five psychological variables: Rebound-ability, The Ability to Handle Pressure, Concentration Ability, Level of Confidence, and Motivation. The data indicates that participants performed moderately well in Rebound-ability (mean = 3.61) and The Ability to Handle Pressure (mean = 3.76), suggesting an average capacity to recover from setbacks and manage pressure effectively. Concentration Ability also showed a comparable mean score of 3.71, indicating a similar level of focus among participants. In contrast, Level of Confidence and Motivation recorded the highest mean scores of 4.88 each, reflecting strong self-confidence and consistently high motivation among the participants. These findings suggest that while participants demonstrate strengths in Level of Confidence and Motivation, their abilities in Rebound-ability, The Ability to Handle Pressure, and Concentration Ability are comparatively moderate, highlighting areas where further development could be beneficial.

Table 2
Level of Mental toughness of Disable Players of Manipur

Level	N	Number of players fall in Categories	Percentage	Categories Range
Strength	41	4	9.76	26-30
Average	41	7	17.07	23-25
Weakness	41	30	73.17	22 and below

The table provides a categorical breakdown of players' Strength Levels based on specific ranges, alongside the number and percentage of players falling into each category. Out of the 41 players evaluated, the majority (73.17%) fall into the Weakness category, with scores of 22 or below. This indicates that most players in the sample struggle in this area. A smaller proportion (17.07%) are classified as having Average strength, with scores ranging from 23 to 25. These players demonstrate moderate abilities, suggesting they are closer to meeting the required standard but still have room for improvement.

Only a minimal number of players (9.76%) fall into the Strength category, scoring between 26 and 30, indicating a high level of ability in this attribute. This suggests that very few participants possess strong capabilities in the evaluated area. Overall, the distribution shows a significant performance gap, with most players requiring targeted interventions to improve their strength levels and move toward higher performance categories.

Table 3
Comparison among the dimension of Mental Toughness of Differently Able Players of Manipur

Independent-Samples Kruskal-Wallis Test	
Total N	205
Test Statistic	38.493 ^a
Degree Of Freedom	4
Asymptotic Sig. (2-sided test)	0.000

The test statistic is adjusted for ties.

The Independent-Samples Kruskal-Wallis Test was conducted to compare the dimensions of mental toughness among differently-abled players from Manipur across five groups. The test statistic was 38.493, and the degrees of freedom (df) were 4. The result yielded a highly significant p-value of 0.000, indicating that there are significant differences in the mental toughness dimensions among the five groups. Given that the test statistic is adjusted for ties. Therefore, the significant p-value suggests that mental toughness varies significantly across the different groups of differently-abled players.

Fig. 2

Graphical Representation on the Comparison among the dimension of Mental Toughness of Differently Able Players of Manipur

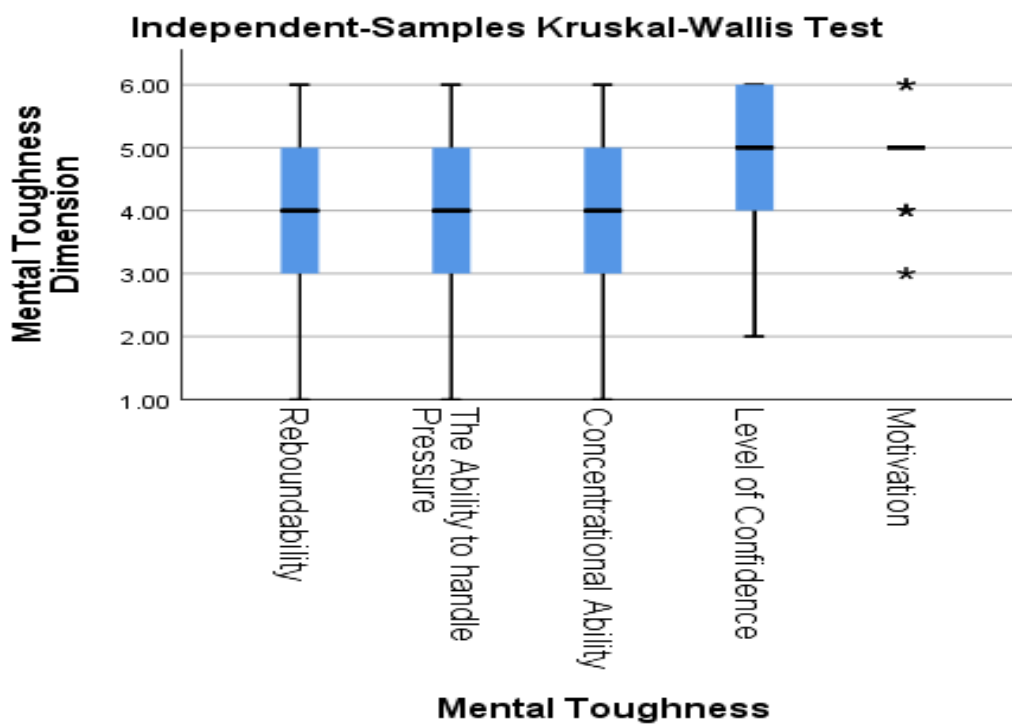


Table 4

Pairwise comparison among the dimension of Mental Toughness of Differently Able Players of Manipur

Pairwise Comparisons of Mental Toughness					
Variables	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig. ^a
Rebound ability-The Ability to handle Pressure	-8.122	12.660	-0.642	0.521	1.000
Rebound ability-Concentration Ability	-8.976	12.660	-0.709	0.478	1.000

Rebound ability-Motivation	-55.756	12.660	-4.404	0.000	0.000
Rebound ability-Level of Confidence	-56.232	12.660	-4.442	0.000	0.000
The Ability to handle Pressure-Concentration Ability	-0.854	12.660	-0.067	0.946	1.000
The Ability to handle Pressure-Motivation	-47.634	12.660	-3.763	0.000	0.002
The Ability to handle Pressure-Level of Confidence	-48.110	12.660	-3.800	0.000	0.001
Concentration Ability-Motivation	-46.780	12.660	-3.695	0.000	0.002
Concentration Ability-Level of Confidence	-47.256	12.660	-3.733	0.000	0.002
Motivation-Level of Confidence	0.476	12.660	0.038	0.970	1.000

**The significance level is .05. Significance values have been adjusted by the Bonferroni correction for multiple tests.*

The table presents pairwise comparisons of mental toughness variables, assessing the differences between them using test statistics, standard errors, and significance levels. In the comparison between Rebound ability and The Ability to handle Pressure, no significant difference was found ($p = 0.521$), indicating that these two variables do not differ substantially. Similarly, rebound ability was not significantly different from Concentration Ability ($p = 0.478$). However, when comparing Rebound ability to Motivation, a significant difference was observed ($p = 0.000$), indicating that these two variables differ significantly, with the difference remaining significant even after adjustments (adjusted $p = 0.000$). The same pattern was seen when comparing Rebound ability to Level of Confidence, with a significant difference ($p = 0.000$). In the pairwise comparison of The Ability to handle Pressure and Concentration Ability, no significant difference was found ($p = 0.946$), suggesting that these two factors are not statistically different. On the other hand, significant differences were found when comparing The Ability to handle Pressure with Motivation ($p = 0.000$) and Level of Confidence ($p = 0.000$), with both adjusted p -values remaining statistically significant ($p = 0.002$ and $p = 0.001$, respectively). These results indicate that The Ability to handle Pressure differs significantly from both Motivation and Level of Confidence.

The comparison between Concentration Ability and Motivation also yielded significant results ($p = 0.000$), suggesting a substantial difference, with the adjusted p -value confirming the significance ($p = 0.002$). Similarly, Concentration Ability and Level of Confidence showed a significant difference ($p = 0.000$, adjusted $p = 0.002$). Finally, Motivation and Level of Confidence were found to have no significant difference ($p = 0.970$), indicating that these two variables are not significantly different. The significant differences were found primarily between Rebound ability, Motivation, and Level of Confidence, while The Ability to handle Pressure also showed significant differences when compared to Motivation and Level of Confidence. However, there were no significant differences in some pairs, particularly between

Rebound ability and The Ability to handle Pressure, as well as Motivation and Level of Confidence.

Discussion

The present study examines the dimensions of mental toughness among differently-abled players from Manipur, focusing on psychological attributes critical to athletic performance, including rebound-ability, the ability to handle pressure, concentration ability, confidence, and motivation. Mental toughness is widely recognized as a determinant of success in competitive sports, enabling athletes to cope with adversity, maintain focus, and perform consistently (Jones et al., 2007).

Rebound-Ability

Rebound-ability, which reflects an athlete's resilience and ability to recover from setbacks, exhibited a moderate mean score. However, significant variability in responses suggests that a substantial proportion of players may struggle with this attribute. This aligns with the findings of (Fletcher & Sarkar, 2012), who emphasized resilience as a core component of psychological readiness in athletes. The observed moderate rebound-ability may result from inadequate psychological preparation or limited exposure to competitive scenarios that build mental endurance (Crust & Azadi, 2010).

Ability to Handle Pressure

The ability to manage stress under high-pressure situations is critical in sports, yet the study identified variability in this attribute among participants. Similar results were reported by (Nicholls et al., 2009) who found that stress management is often a weaker attribute in athletes with less structured psychological training. Stress inoculation techniques, such as relaxation training and simulated pressure drills, have proven effective in enhancing this capacity (Kashani et al., 2015).

Concentration Ability

Concentration ability showed the widest range of scores, with some participants displaying significant struggles in maintaining focus. Poor focus can lead to performance inconsistencies, as suggested by (Dereceli, 2018). Mindfulness-based interventions, which have shown promising results in improving attentional control and reducing distractions (Birrer et al., 2012) could help athletes strengthen their concentration abilities.

Confidence and Motivation

Confidence and motivation emerged as the strongest attributes among participants, with consistently high scores and minimal variability. These findings corroborate the work of (Koivisto & Hamari, 2019) who identified confidence as a key psychological factor distinguishing elite athletes. Intrinsic motivation, as described by (Di Domenico & Ryan, 2017), plays a crucial role in sustaining effort and overcoming challenges. High levels of confidence and motivation among the study's participants suggest that these athletes possess a strong internal drive and belief in their abilities, which could be leveraged to enhance other dimensions of mental toughness.

Comparison Across Dimensions

Significant differences were observed between certain dimensions, particularly between confidence and motivation versus rebound-ability and the ability to handle pressure. These results align with the hierarchical model of mental toughness proposed by (Gucciardi & Jones, 2012), which highlights variability in the development of psychological attributes among athletes. While high confidence and motivation provide a solid foundation, the relative deficits in resilience and stress management indicate areas where targeted interventions are needed.

The findings have important implications for coaches, sports psychologists, and stakeholders involved in the development of differently-abled athletes. Given that a majority of participants (73%) were categorized as having low overall mental toughness, structured psychological training programs are essential. Although the study provides light on the mental toughness of athletes with disabilities, its generalisability is limited by its concentration on a particular geographic demographic. Larger, more varied sample sizes should be taken into account in future studies to examine contextual and cultural influences on mental toughness. Furthermore, long-term research evaluating how psychological therapies affect the development of mental toughness would offer solid proof of successful methods.

Conclusion:

The study concludes that participants had strong motivation and confidence, which reflects their capacity to create objectives and keep a good attitude. But the study also finds moderate skills in controlling pressure, attention, and rebound ability, indicating important areas that need more work. Overall, the mental toughness of differently-abled players is generally weak, with the majority of participants categorized as weak, a few as average, and very few as strong. These findings show the value of systematic psychological training programs created especially for athletes with disabilities, emphasising the development of resilience, stress management, and attentional control. The study's conclusions may not be as applicable to other areas or cultural situations due to its exclusive focus on Manipuri athletes. The rather small sample size of 41 participants limits both statistical strength and wider applicability. Additionally, the use of self-reported questionnaires raises the possibility of biases including subjective question interpretation and social desirability, which could compromise the data's accuracy.

In order to better understand contextual influences on mental toughness, future study should strive to include a wider and more diversified population, including athletes from a range of regional and cultural backgrounds. To address the identified deficits, specialised mental skills training programs should be created, integrating methods like stress inoculation, mindfulness, and resilience-building techniques. Future research should integrate self-reported data with objective data in order to obtain a comprehensive understanding.

References:

- 3(2): 248-250 A comparative analysis of mental toughness in different level sportsmen Sukashant S Patil. (2016). www.kheljournal.com
- Birrer, D., Röthlin, P., & Morgan, G. (2012). Mindfulness to Enhance Athletic Performance: Theoretical Considerations and Possible Impact Mechanisms. *Mindfulness*, 3(3), 235–246. <https://doi.org/10.1007/s12671-012-0109-2>
- Cowden, R. G., Crust, L., Tibbert, S. J., & Jackman, P. C. (2020). Mental toughness development and training in sport. In *Advancements in Mental Skills Training* (pp. 28–43). Routledge. <https://doi.org/10.4324/9780429025112-4>
- Crust, L., & Azadi, K. (2010). Mental toughness and athletes' use of psychological strategies. *European Journal of Sport Science*, 10(1), 43–51. <https://doi.org/10.1080/17461390903049972>
- Dereceli, Ç. (2018). An Examination of Concentration and Mental Toughness in Professional Basketball Players. *Journal of Education and Training Studies*, 7(1), 17. <https://doi.org/10.11114/jets.v7i1.3841>
- Di Domenico, S. I., & Ryan, R. M. (2017). The Emerging Neuroscience of Intrinsic Motivation: A New Frontier in Self-Determination Research. *Frontiers in Human Neuroscience*, 11, 145. <https://doi.org/10.3389/fnhum.2017.00145>
- Dieffenbach, K. D., & Statler, T. A. (2012). More Similar than Different: The Psychological Environment of Paralympic Sport. *Journal of Sport Psychology in Action*, 3(2), 109–118. <https://doi.org/10.1080/21520704.2012.683322>

- Elroy Pinto. (2015). A Comparative Study of Mental Toughness between Individual Game and Team Game Players of Maharashtra. *International Journal of Physical Education, Fitness and Sports*, 4(4), 06–18. <https://doi.org/10.26524/1542>
- Fagher, K., Forsberg, A., Jacobsson, J., Timpka, T., Dahlström, Ö., & Lexell, J. (2016a). Paralympic athletes' perceptions of their experiences of sports-related injuries, risk factors and preventive possibilities. *European Journal of Sport Science*, 16(8), 1240–1249. <https://doi.org/10.1080/17461391.2016.1192689>
- Fagher, K., Forsberg, A., Jacobsson, J., Timpka, T., Dahlström, Ö., & Lexell, J. (2016b). Paralympic athletes' perceptions of their experiences of sports-related injuries, risk factors and preventive possibilities. *European Journal of Sport Science*, 16(8), 1240–1249. <https://doi.org/10.1080/17461391.2016.1192689>
- Ferreira, R. W., de Athayde Costa e Silva, A., Brandão, M. R. F., Magno e Silva, M. P., Gaia, J. W. P., & Pires, D. A. (2024). Burnout syndrome and coping strategies in athletes with disabilities: a systematic review. *Current Psychology*, 43(12), 11023–11036. <https://doi.org/10.1007/s12144-023-05186-9>
- Fletcher, D., & Sarkar, M. (2012). A grounded theory of psychological resilience in Olympic champions. *Psychology of Sport and Exercise*, 13(5), 669–678. <https://doi.org/10.1016/j.psychsport.2012.04.007>
- Gucciardi, D. F., & Jones, M. I. (2012). Beyond Optimal Performance: Mental Toughness Profiles and Developmental Success in Adolescent Cricketers. *Journal of Sport and Exercise Psychology*, 34(1), 16–36. <https://doi.org/10.1123/jsep.34.1.16>
- Jones, G., Hanton, S., & Connaughton, D. (2007). A Framework of Mental Toughness in the World's Best Performers. *The Sport Psychologist*, 21(2), 243–264. <https://doi.org/10.1123/tsp.21.2.243>
- Kashani, F., Kashani, P., Moghimian, M., & Shakour, M. (2015). Effect of stress inoculation training on the levels of stress, anxiety, and depression in cancer patients. *Iranian Journal of Nursing and Midwifery Research*, 20(3), 359–364.
- Koivisto, J., & Hamari, J. (2019). The rise of motivational information systems: A review of gamification research. *International Journal of Information Management*, 45, 191–210. <https://doi.org/10.1016/j.ijinfomgt.2018.10.013>
- Krasmik, Y., Aimaganbetova, O., Iancheva, T., Zhantikejev, S., Lashkova, E., Makhmutov, A., & Rakhmalin, B. (2024). Motivational determinants of athletes' self-realisation depending on their professional qualification. *BMC Psychology*, 12(1), 416. <https://doi.org/10.1186/s40359-024-01895-3>
- Martin, J. J. (2008). Multidimensional Self-Efficacy and Affect in Wheelchair Basketball Players. *Adapted Physical Activity Quarterly*, 25(4), 275–288. <https://doi.org/10.1123/apaq.25.4.275>
- Martin, J. J. (2015). Determinants of Elite Disability Sport Performance. *Kinesiology Review*, 4(1), 91–98. <https://doi.org/10.1123/kr.2014-0082>
- Neves, A. N., Zanetti, M. C., de Almeida, J. G., Mainenti, M. R. M., & dos Santos Vigário, P. (2022). Athletes Motivation, Anxiety and Locus of Control at the Brazilian Powerchair Football National Championship. *European Journal of Adapted Physical Activity*, 15. <https://doi.org/10.5507/euj.2021.011>
- Nicholls, A. R., Levy, A. R., Grice, A., & Polman, R. C. J. (2009). Stress appraisals, coping, and coping effectiveness among international cross-country runners during training and competition. *European Journal of Sport Science*, 9(5), 285–293. <https://doi.org/10.1080/17461390902836049>
- Ötting, M., Deutscher, C., Schneemann, S., Langrock, R., Gehrman, S., & Scholten, H. (2020). Performance under pressure in skill tasks: An analysis of professional darts. *PloS One*, 15(2), e0228870. <https://doi.org/10.1371/journal.pone.0228870>

- Powell, A. J., & Myers, T. D. (2017a). Developing mental toughness: Lessons from Paralympians. *Frontiers in Psychology, 8*(AUG). <https://doi.org/10.3389/fpsyg.2017.01270>
- Powell, A. J., & Myers, T. D. (2017b). Developing Mental Toughness: Lessons from Paralympians. *Frontiers in Psychology, 8*. <https://doi.org/10.3389/fpsyg.2017.01270>
- Powell, A. J., & Myers, T. D. (2017c). Developing Mental Toughness: Lessons from Paralympians. *Frontiers in Psychology, 8*. <https://doi.org/10.3389/fpsyg.2017.01270>
- Sisto, A., Vicinanza, F., Campanozzi, L. L., Ricci, G., Tartaglini, D., & Tambone, V. (2019). Towards a Transversal Definition of Psychological Resilience: A Literature Review. *Medicina (Kaunas, Lithuania), 55*(11). <https://doi.org/10.3390/medicina55110745>
- Thiessen, B., Blacker, M., & Sullivan, P. (2024). Mental toughness and choking susceptibility in athletes. *Frontiers in Psychology, 15*, 1414499. <https://doi.org/10.3389/fpsyg.2024.1414499>
- Vaithianathan, K. (2019). Difference in the components of mental toughness in players of body contact games. ~ 1142 ~ *International Journal of Physiology, 4*(1), 1142–1146. www.journalofsports.com
- YARAYAN, Y. E., İLHAN, E. L., ESENTÜRK, O. K., ARI, Ç., & GÜLŞEN, D. B. A. (2023). Does Emotional Intelligence Affect Mental Toughness in Physically Disabled Athletes? *Spor Bilimleri Araştırmaları Dergisi, 8*(2), 231–242. <https://doi.org/10.25307/jssr.1228541>