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Mental Toughness in Young Football Players: An Analysis of Psychological Performance Across Different Age Groups

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Abstract: *Mental toughness is a multifaceted trait that has a big impact on psychological success. It has parts that are cognitive, emotional, and behavioral, as well as self-confidence. People who are mentally tough tend to do well in sports and have good mental health and well-being. It was the goal of this study to look at the relationship between different aspects of mental toughness and age groups in young football players in order to find out if there are different psychological skills that help them grow. Loher created the Psychological Performance Inventory (PPI), which was filled out by 121 male players. The results showed that there were statistically significant differences between three age groups in four variables: controlling negative energy, controlling attention, controlling visual and mental images, and controlling motivated level. The best results were seen in the U19 category for all factors. Things got worse in the semi-professional category after that. There were strong links found between mental toughness factors and age groups. It was found that the age group variable had a strong positive relationship with the ability to focus, the ability to control images and visuals, and the level of drive. As with the other variables, self-confidence was linked to being able to control bad energy, paying attention, being motivated, and having positive energy. During the developmental phase, evaluating psychological factors like mental resilience can help teachers and players choose the right mental skill training to improve performance in competition and achieve sports success. Additionally, it supports healthy mental growth and general well-being.*
Keywords: *Psychological Performance, Football, Mental Strength, Attention Control, Self-Confidence, Mental Toughness*

INTRODUCTION

In modern times, the cognitive aspect is considered a crucial factor that influences the attainment of sports objectives (Cox, 2012), along with other attributes like as physical, technical, tactical, and strategic talents (Zeiger & Zeiger, 2018). There is an increasing interest in understanding the potential elements, such as mental toughness, that lead to disappointing outcomes in high-level sports, especially when players do not perform well. Mental toughness is a distinct cognitive ability that is applicable not just to athletics but also to general welfare (Powell & Myers, 2017). The use and cultivation of mental resilience are vital for the personal advancement and welfare of young athletes. Mental toughness is a multifaceted trait that is strongly associated with a good self-image, self-confidence, the ability to bounce back from challenges in both training and contests, improved focus, and the capacity to overcome feelings of failure. Psychological well-being is strongly correlated with mental resilience, since it considers an individual's capacity to overcome obstacles and bolster their own fortitude. Furthermore, it entails taking initiative in actively pursuing opportunities for self-enhancement and obtaining novel skills (Liew et al., 2019). According to the findings of Jones et al. (2007), it is crucial to provide athletes with a wide array of psychological abilities. These abilities will enable individuals to achieve their maximum potential in many areas of competition and also have an influence on other crucial characteristics for their athletic growth, such as their capacity to recuperate, self-confidence, and dedication to a healthy lifestyle (Gerber et al., 2018).

From this standpoint, it is important to acknowledge that the growth of young athletes should be addressed comprehensively, encompassing both their performance enhancement and their psychological and physical development. Multiple studies have demonstrated a clear correlation between the cognitive capabilities of athletes and their achievements in other aspects of life, extending beyond just their performance in competitive sports (Reverberi et al., 2020). By cultivating attributes such as resilience, having clear objectives, and engaging in introspection, athletes may enhance their performance in their respective sports while also improving their academic outcomes and experiencing significant advancements in their overall well-being (Murray et al., 2020). Within the scientific literature, there is a notable focus on studying whether athletes acquire mental abilities or not. Some investigations compare specific abilities, while others analyze their occurrence based on the athlete's level. Additionally, there are studies that examine the relationship between the quality of mental skills training and these abilities.

Loehr (1986, 1995) found that both coaches and players recognize that at least 50% of success is influenced by psychological factors related to mental processes. In addition, Gucciardi et al. (2017) showed that the psychological component contributes to 90% of the deciding factor for success in relation to strength, abilities, and the will to succeed. Similarly, Gould et al. (1987) discovered that 82% of coaches acknowledged the pivotal significance of mental fortitude in achieving success in athletics.

Moreover, research has shown that there is an inverse relationship between high levels of mental toughness and mental talents and issues like depression or perceived stress. These qualities play a crucial role in defining the competitive level of players and also impact their overall well-being. Enhancing mental strength is closely linked to the player's mental well-being (Gucciardi, 2018). Therefore, the technical staff's focus on developing these mental abilities is crucial to ensure their psychological health, which in turn directly impacts physical fitness and sports performance (Gerber et al., 2015).

Loehr (1986) proposed a psychological model that describes mental toughness as an athlete's ability to efficiently harness energy in demanding conditions. This model delineates seven psychological skills: self-assurance, regulation of negative emotions, focus control, regulation of visual and mental images, degree of drive, regulation of positive emotions, and attitude control. These seven psychological characteristics have been recognized by the scientific community and have been used as a basis for further scientific studies in the field (Golby & Sheard, 2004; Kocaeksi et al., 2022).

Although these elements are important in individual sports, they seem to be much more vital in team sports. The mental condition of a team is critical in achieving collective success in all team sports (Ridpath et al., 2012; Kristjánsdóttir et al., 2019). Several factors, such as the result of the previous game, the significance of the game, and the timing of the game, might influence performance in a competition (Hays et al., 2007). Furthermore, Meggs & Chen (2019) suggested that mental toughness might positively influence the cognitive exertion and emotional control necessary to improve performance and attain a state of flow.

Furthermore, Reverberi et al. (2020) contended that the enhancement of emotions associated with mental resilience is directly influenced by the player's surroundings. Their sport success will be determined by their psychological state and mental well-being, provided that they are well supported. The crucial factor in enhancing players' performance and overall well-being-

The essence of human existence is in their psychological growth, as well as their interactions with others. Prior research has demonstrated that an individual's mental toughness is influenced by both genetic factors (heritage) and environmental impacts, as well as experiences and learning processes (Bell et al., 2013).

Recent research has emphasized the substantial impact of mental resilience in the sport of football. The ability to retain concentration on goals, make adaptable and efficient judgments, and minimize feelings of worry or fatigue is widely recognized as a critical attribute for players (Thelwell et al., 2010).

Given the aforementioned occurrences, it is important to examine the relationship between several psychological factors that influence the growth of a football player's abilities, performance in competitions, and other factors like age categories. The distinctiveness of our study lies in its capacity to assess mental resilience across all key categories within a single football squad, competing at the highest level in each stage.

Adopting this perspective aids in understanding how psychological performance may differ and develop in distinct teams that operate within the same system and share a working philosophy inside a club. The main aim of this study was to investigate the relationship between different age groups and the various components of mental resilience, particularly among young football players from a major football team in Spain. Furthermore, we endeavored to categorize players' psychological aptitudes according to their age (Finston, 2022). Building upon prior research that has established a correlation between enhanced cognitive and motor abilities and elevated levels of mental resilience (Sarmento et al., 2018), we formulated a hypothesis that psychological performance, specifically mental resilience, would be greater in younger age groups and higher skill categories, with the most pronounced manifestation observed in semi-professional football players.

MATERIALS AND METHODS

Participants: A cross-sectional study was performed on a specific group of 121 male football players from various football clubs in Lahore. The players were categorized based on age and experience: U14 (n = 30), U16 (n = 36), U19 (n = 40), and Semi-professional (n = 15, starting from age 19). The average age of the players was 16.91 ± 2.42 years, and they had an average of 8.56 ± 1.22 years of football experience.

Measures: The Psychological Performance Inventory (Loehr, 1986; Loehr, 1995) was used to assess mental toughness in all the areas of mental abilities specified in Loehr's paradigm. This inventory provides a thorough assessment of the athlete's strengths and weaknesses. The questionnaire comprises 42 items that are evaluated using a Likert scale spanning from 1 to 5. The items in question evaluate seven distinct dimensions: self-confidence, mastery over negative energy, mastery over positive energy (which assesses emotional regulation), control over attention, control over visual and mental imagery (which measures concentration), degree of motivation, and control over attitude. These seven measures were used to develop a psychological profile of high performance. The score range for each scale spanned from 0 to 30 points, divided into three qualitative levels: low (0-19 points), medium (20-25 points), and high (25-30 points). Performance levels were deemed satisfactory for scores exceeding 20 points, and exceptional for values ranging from 25 to 30.

Procedure: A sample of 121 male football players was selected from several football teams in Lahore, Pakistan. The sample included players from different age groups, namely Under 14 (U14), Under 16 (U16), Under 19 (U19), and Semi-professional (starting from age 19). Before taking part, all participants or their legal guardians, if they were under 18 years old, gave informed consent to be the part of the study. The data collecting process consisted of delivering the Psychological Performance Inventory (PPI), which consisted of 42 Likert-scale items ranging from 1 to 5. The purpose of the PPI was to assess different aspects of mental toughness based on Loehr's concept. The questionnaire evaluated seven dimensions: self-assurance, management of negative energy, management of positive energy (emotional regulation), control of attention, control of visual and mental imagery (concentration), degree of motivation, and control of attitude. The responses from the PPI were evaluated based on predetermined criteria, with each dimension being assigned a score ranging from 0 to 30 points.

STATISTICAL ANALYSIS

The data obtained was then analyzed using SPSS version 27. Cronbach Alpha was calculated to see the reliability of the scale. ANOVA was used to study the differences of means among different age groups of football players whereas; correlational analysis was done to see the relationship of different subscales of Psychological Performance Inventory.

Table 1 *Descriptive data and significant differences obtained for the studied variables considering the category and age.*

	U14 (N = 30)	**U16 (N = 36)**	**U19 (N = 40)**	**Semi Professional (N = 15)**	**F**	***p*-Value**

Self-confidence	25.24 ± 3.67	25.61 ± 3.21	27.04 ± 3.98	25.06 ± 3.94	3.243	ns
Negative Energy Control	20.94 ± 4.07	21.07 ± 3.21	23.40 ± 3.85	20.97 ± 2.94	2.841	<0.05
Attention Control	21.93 ± 2.40	23.46 ± 3.59	23.40 ± 2.46	23.89 ± 2.78	6.567	<0.01
Visual and Image Control	23.59 ± 4.35	25.06 ± 3.35	26.26 ± 3.01	25.46 ± 3.36	3.446	<0.05
Motivation Level	26.34 ± 3.69	27.05 ± 2.26	28.30 ± 2.71	26.12 ± 1.75	3.986	<0.01
Positive Energy	25.08 ± 4.66	25.03 ± 3.53	27.01 ± 3.39	26.25 ± 3.01	1.629	ns
Attitude Control	24.53 ± 3.67	25.27 ± 3.01	26.09 ± 3.30	24.91 ± 2.53	1.024	ns

The descriptive statistics and significant differences among the examined variables, taking into account the categories and age groups of the football players, unveil several important discoveries. Regarding self-confidence, there were no statistically significant variations seen among different age groups, suggesting a similar degree of self-assurance among players of all ages. However, there were noticeable disparities in terms of the management of negative energy, focus control, visual and image manipulation, and degree of motivation. More specifically, the U14 and U16 age groups showed lower scores in these dimensions compared to the U19 group. This indicates that as players mature, there is a developmental shift towards improved regulation of negative energy, attention, visualization, and motivation. In addition, the semi-professional category consistently showed similar results to the U19 group, suggesting a consistent degree of mental resilience across later phases of growth. In contrast, factors such as positive energy and attitude management exhibited no significant variations among different age groups, suggesting a uniform degree of emotional regulation and attitude maintenance irrespective of age. These findings emphasize the significance of comprehending the intricate progression of mental resilience in young football players. This has implications for focused mental skill training to maximize performance and well-being at different phases of development.

Table 2 *Bivariate correlations of the total sample for the different variables and age factor.*

	Self-Confidence	**Negative Energy Control**	**Attention Control**	**Visual Control**	**Motivation Level**	**Positive Energy**	**Attitude Control**
Negative Energy	0.701 ***						
Attention Control	0.550 ***	0.605 ***					
Visual Control	0.324**	−0.005	0.095				
Motivation Level	0.521***	0.389 ***	0.486 ***	0.260			
Positive Energy	0.686 ***	0.426 ***	0.652 ***	0.526***	0.546 ***		
Attitude Control	0.602 ***	0.531 ***	0.482 ***	0.324 *	0.324 *	0.735***	
Age	0.097	−0.030	0.286 **	0.183 *	0.309 *	0.126	0.026

Bivariate correlations revealed significant links among several psychological variables in the entire sample of football players. Self-confidence had strong positive correlations with positive energy and the management of attitude, as well as moderate positive correlations with attention regulation and level of motivation. There

was a strong correlation between the ability to regulate negative energy and attention control, as well as a moderate correlation with motivation level and attitude management. Attention control had moderate positive correlations with visual control, motivation level, positive energy, and attitude control. There was a positive association between motivation level and self-confidence, attention control, positive energy, and attitude control. Positive energy shown strong positive correlations with self-confidence, attention control, level of motivation, and attitude control. Attitude control shown notable positive correlations with self-confidence, management of negative energy, regulation of attention, degree of motivation, and positive energy. Age had slight positive correlations with attention control, visual control, and motivation level. The findings underscore the interconnectedness of several psychological factors and provide potential approaches to enhance mental resilience in football players of different age groups.

DISCUSSION

The present study examined the correlation between several factors of mental resilience and age groups among adolescent soccer players, revealing noteworthy discoveries. Mental toughness is a multifaceted notion that encompasses several characteristics, including cognitive, emotional, and behavioral components. According to Clough et al. (2002), it is of utmost importance in attaining success in sports and sustaining positive psychological health. The findings of our research reveal significant disparities in mental resilience aspects according to age, with older players exhibiting enhanced psychological capacities compared to younger players.

The research found that older players, namely those in the U19 and semi-professional groups, had higher levels of performance in negative energy management, attention control, visual and imagery control, and motivation compared to younger players in the U14 and U16 divisions. The study conducted by Nicholls et al. (2009) suggests that some components of mental toughness, such as the ability to manage negative emotions, retain concentration, visualize achievement, and sustain high levels of desire, tend to improve and strengthen with age and experience. The results align with previous research indicating that mental resilience is developed by long-term involvement in competitive sports environments and training in mental skills (Gucciardi et al., 2009).

The older age groups shown considerable progress in managing stress and anxiety, as indicated by the management of negative energy ($F = 2.841$, $p < .05$). This discovery aligns with the study conducted by Mahoney et al. (2014), which revealed that seasoned athletes possess superior abilities to manage stress as a result of their comprehensive coping mechanisms and resilience training. Similarly, the ability to manage attention, which is crucial for keeping focus throughout performance, exhibited notable variations related to age ($F = 6.567$, $p < .01$). The findings affirm the idea that cognitive abilities, such as attention, enhance with age and experience in the realm of athletics (Moran & Toner, 2017).

The study found that there were substantial age-related changes in visual and imagery control, which is critical for focus and performance visualization ($F = 3.446$, $p < .05$). This is consistent with research indicating that the ability to visualize mentally improves with practice and experience, leading to greater performance results (Cumming & Hall, 2002). Furthermore, the study found that older players had substantially greater levels of motivation ($F = 3.986$, $p < .01$). This supports previous research indicating that intrinsic motivation tends to grow with age and experience in sports (Bauman, 2015).

Notably, there were no notable disparities identified in positive energy and attitude management among different age groups, indicating that these aspects of mental toughness remain rather consistent regardless of age. Young athletes consistently exhibit good energy, characterized by an enthusiastic and energetic outlook, as well as attitude management, the capacity to remain upbeat and collected. The results of this study are consistent with previous research that suggests that certain components of mental toughness, such as positive emotions and mindset, may be more inherent characteristics and less affected by age or experience (Cowden, 2016).

The bivariate correlations demonstrated substantial connections between the psychological factors, highlighting the interrelatedness of the components of mental toughness. Self-confidence had significant positive relationships with positive energy ($r = .686$, $p < .001$) and attitude management ($r = .602$, $p < .001$), suggesting that athletes who possess confidence are more inclined to sustain positive energy and regulate their attitude. Crust's (2008) study supports the notion that self-confidence plays a crucial role in mental toughness, bolstering other psychological abilities.

The ability to regulate negative energy was highly associated with the ability to manage attention ($r = .605$, $p < .001$), and somewhat associated with motivation level ($r = .389$, $p < .001$) and attitude control ($r = .531$, $p < .001$). This implies that athletes who are capable of effectively handling negative emotions have superior abilities in sustaining concentration and drive, supporting the conclusions drawn by Connaughton et al. (2008) about the significance of emotional regulation in athletic performance. Attention control had moderate relationships with visual control ($r = .286$, $p < .01$), motivation level ($r = .486$, $p < .001$), positive energy ($r = .652$, $p < .001$), and attitude control ($r = .482$, $p < .001$), emphasizing its function in promoting other aspects of mental toughness.

The degree of motivation had a positive correlation with self-confidence ($r = .521$, $p < .001$), attention control ($r = .486$, $p < .001$), positive energy ($r = .546$, $p < .001$), and attitude control ($r = .324$, $p < .05$). These findings indicate that athletes that are driven are more likely to possess confidence, concentration, and a positive mindset, which aligns with the research conducted by Chen & Cheesman (2013). Positive energy shown significant associations with self-assurance, focus, drive, and regulation of attitude, emphasizing the influence of a positive mentality in bolstering several facets of mental resilience.

These findings carry significant ramifications for coaches and sports psychologists. Gaining insight into the progression of mental toughness development might assist in customizing training programs to target distinct psychological requirements at various phases. Younger athletes may benefit greatly from programs that specifically target the enhancement of negative energy regulation, attentiveness, and motivation. Coaches have the ability to apply tactics such as stress management methods, focus exercises, and motivational interventions in order to improve these skills (Gucciardi et al., 2009).

It is essential for older athletes to preserve and enhance these abilities. Utilizing advanced visualization methods, maintaining a consistent emphasis on stress management, and enhancing intrinsic motivation can effectively maintain high levels of performance. In addition, cultivating a constructive and resilient mentality from a young age helps establish a solid basis for the development of other aspects of mental toughness (Connaughton et al., 2008).

CONCLUSION

The study highlights the importance of age and experience in the formation of mental resilience in young football players. Elderly athletes demonstrate improved abilities in effectively controlling negative energy, sustaining focus, envisioning performance, and keeping motivation. The constant levels of optimism and emotional regulation seen across different age groups underscore the possible durability of these characteristics. These findings may be utilized by coaches and sports psychologists to create mental skills training programs that are suitable for different age groups. This will improve players' performance and overall psychological well-being. Subsequent investigations should focus on extending these discoveries by doing long term studies and include a wider range of participants, so providing a more detailed understanding of the complex dynamics of mental resilience in sports. Although this study provides significant insights, it also has several drawbacks. The cross-sectional design offers a momentary glimpse rather than a long-term view of the progression of mental toughness. Subsequent investigations should incorporate longitudinal studies to monitor changes over an extended period and assess the effects of certain therapies. Furthermore, the sample size was restricted to male football players only from Lahore, which might potentially restrict the applicability of the results. By including female athletes and players from varied places, a more thorough comprehension of mental fortitude in sports may be attained.

REFERENCES

- Bauman, N. J. (2015, November 30). The stigma of mental health in athletes: are mental toughness and mental health seen as contradictory in elite sport? *British Journal of Sports Medicine*, *50*(3), 135–136. https://doi.org/10.1136/bjsports-2015-095570
- Bell, J. J., Hardy, L., & Beattie, S. (2013, November). Enhancing mental toughness and performance under pressure in elite young cricketers: A 2-year longitudinal intervention. *Sport, Exercise, and Performance Psychology*, *2*(4), 281–297. https://doi.org/10.1037/a0033129
- Chen, M. A., & Cheesman, D. J. (2013, July 18). MENTAL TOUGHNESS OF MIXED MARTIAL ARTS ATHLETES AT DIFFERENT LEVELS OF COMPETITION1. *Perceptual and Motor Skills*, 130718095826009. https://doi.org/10.2466/29.30.pms.116.3
- Clough, P., Earle, K., Perry, J. L., & Crust, L. (2012, November). Comment on "Progressing measurement in mental toughness: A case example of the Mental Toughness Questionnaire 48" by Gucciardi, Hanton, and Mallett (2012). *Sport, Exercise, and Performance Psychology*, *1*(4), 283–287. https://doi.org/10.1037/a0029771
- Connaughton, D., Wadey, R., Hanton, S., & Jones, G. (2008, January). The development and maintenance of mental toughness: Perceptions of elite performers. *Journal of Sports Sciences*, *26*(1), 83–95. https://doi.org/10.1080/02640410701310958
- Cowden, R. G. (2016, October 2). Mental Toughness, Emotional Intelligence, and Coping Effectiveness. *Perceptual and Motor Skills*, *123*(3), 737–753. https://doi.org/10.1177/0031512516666027
- Cox, R. H. (2012, January 1). *Sport Psychology*. http://books.google.ie/books?id=Oud7kgEACAAJ&dq=1.%09Cox,+R.H.+Sport+Psychology:+Concepts+and+Applications%3B+McGrawHill:+New+York+City,+NY,+USA,+2007.&hl=&cd=1&source=gbs_api
- Crust, L. (2008, November). A review and conceptual re-examination of mental toughness: Implications for future researchers. *Personality and Individual Differences*, *45*(7), 576–583. https://doi.org/10.1016/j.paid.2008.07.005
- Cumming, J., & Hall, C. (2002, January). Deliberate imagery practice: the development of imagery skills in competitive athletes. *Journal of Sports Sciences*, *20*(2), 137–145. https://doi.org/10.1080/026404102317200846
- Finston, L. (2022). An introduction to GNU 3DLDF. *TUGboat*, *43*(3), 319–332. https://doi.org/10.47397/tb/43-3/tb135finston-3dldf
- Gerber, M., Feldmeth, A. K., Lang, C., Brand, S., Elliot, C., Holsboer-Trachsler, E., & Pühse, U. (2015, December). The Relationship between Mental Toughness, Stress, and Burnout among Adolescents: A Longitudinal Study with Swiss Vocational Students. *Psychological Reports*, *117*(3), 703–723. https://doi.org/10.2466/14.02.pr0.117c29z6
- Gerber, M., Best, S., Meerstetter, F., Walter, M., Ludyga, S., Brand, S., Bianchi, R., Madigan, D. J., Isoard-Gautheur, S., & Gustafsson, H. (2018, December). Effects of stress and mental toughness on burnout and depressive symptoms: A prospective study with young elite athletes. *Journal of Science and Medicine in Sport*, *21*(12), 1200–1205. https://doi.org/10.1016/j.jsams.2018.05.018
- Gould, D., Hodge, K., Peterson, K., & Petlichkoff, L. (1987, December). Psychological Foundations of Coaching: Similarities and Differences among Intercollegiate Wrestling Coaches. *The Sport Psychologist*, *1*(4), 293–308. https://doi.org/10.1123/tsp.1.4.293
- Golby, J., & Sheard, M. (2004, October). Mental toughness and hardiness at different levels of rugby league. *Personality and Individual Differences*, *37*(5), 933–942. https://doi.org/10.1016/j.paid.2003.10.015
- Gucciardi, D. F., Gordon, S., & Dimmock, J. A. (2009, March). Advancing mental toughness research and theory using personal construct psychology. *International Review of Sport and Exercise Psychology*, *2*(1), 54–72. https://doi.org/10.1080/17509840802705938
- Gucciardi, D. F., Hanton, S., & Fleming, S. (2017, March). Are mental toughness and mental health contradictory concepts in elite sport? A narrative review of theory and evidence. *Journal of Science and Medicine in Sport*, *20*(3), 307–311. https://doi.org/10.1016/j.jsams.2016.08.006
- Gucciardi, D. F. (2018, January 9). Commentary: Mental Toughness and Individual Differences in Learning, Educational and Work Performance, Psychological Well-being, and Personality: A Systematic Review. *Frontiers in Psychology*, *8*. https://doi.org/10.3389/fpsyg.2017.02329
- Hays, K., Maynard, I., Thomas, O., & Bawden, M. (2007, October 18). Sources and Types of Confidence Identified by World Class Sport Performers. *Journal of Applied Sport Psychology*, *19*(4), 434–456. https://doi.org/10.1080/10413200701599173
- Jones, G., Hanton, S., & Connaughton, D. (2007, June). 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
- Kocaeksi, S., Aksakal, N., & Yöney, Y. (2022, June). Does Mental Toughness in Football Change as per the Change in League and Education Level? *AMBIENT SCIENCE*, *9*(01), 8–10. https://doi.org/10.21276/ambi.2022.09.2.oa01
- Kristjánsdóttir, H., Jóhannsdóttir, K. R., Pic, M., & Saavedra, J. M. (2019, September 6). Psychological characteristics in women football players: Skills, mental toughness, and anxiety. *Scandinavian Journal of Psychology*, *60*(6), 609–615. https://doi.org/10.1111/sjop.12571
- Liew, G. C., Kuan, G., Chin, N. S., & Hashim, H. A. (2019, July 17). Mental toughness in sport. *German Journal of Exercise and Sport Research*, *49*(4), 381–394. https://doi.org/10.1007/s12662-019-00603-3

- Loehr, J. E. (1986, January 1). *Mental Toughness Training for Sports*. Penguin Group. http://books.google.ie/books?id=fHpYAAAAYAAJ&q=24.%09Loehr,+J.E.+Athletic+Excellence:+Mental+Toughness+Training+for+Sport%3B+Forum+Publishing+Co.:+New+York+City,+NY,+USA,+1982&dq=24.%09Loehr,+J.E.+Athletic+Excellence:+Mental+Toughness+Training+for+Sport%3B+Forum+Publishing+Co.:+New+York+City,+NY,+USA,+1982&hl=&cd=1&source=gbs_api
- Loehr, J. E. (1995, November 1). *The New Toughness Training for Sports*. Plume. http://books.google.ie/books?id=7RJywrj7Mo0C&q=24.%09Loehr,+J.E.+Athletic+Excellence:+Mental+Toughness+Training+for+Sport%3B+Forum+Publishing+Co.:+New+York+City,+NY,+USA,+1982&dq=24.%09Loehr,+J.E.+Athletic+Excellence:+Mental+Toughness+Training+for+Sport%3B+Forum+Publishing+Co.:+New+York+City,+NY,+USA,+1982&hl=&cd=3&source=gbs_api
- Mahoney, J., Ntoumanis, N., Mallett, C., & Gucciardi, D. (2014, January). The motivational antecedents of the development of mental toughness: a self-determination theory perspective. *International Review of Sport and Exercise Psychology*, *7*(1), 184–197. https://doi.org/10.1080/1750984x.2014.925951
- Meggs, J., & Chen, M. A. (2019, June 11). Competitive Performance Effects of Psychological Skill Training for Youth Swimmers. *Perceptual and Motor Skills*, *126*(5), 886–903. https://doi.org/10.1177/0031512519852533
- Moran, A., & Toner, J. (2017, February 24). *A Critical Introduction to Sport Psychology*. Routledge. http://books.google.ie/books?id=65cnDwAAQBAJ&printsec=frontcover&dq=Moran,+A.+P.+(2012).+Sport+and+exercise+psychology:+A+critical+introduction.+Routledge.&hl=&cd=3&source=gbs_api
- Murray, R. M., Dugdale, J. H., Habeeb, C. M., & Arthur, C. A. (2020, May 25). Transformational parenting and coaching on mental toughness and physical performance in adolescent soccer players: The moderating effect of athlete age. *European Journal of Sport Science*, *21*(4), 580–589. https://doi.org/10.1080/17461391.2020.1765027
- Powell, A. J., & Myers, T. D. (2017, August 3). Developing Mental Toughness: Lessons from Paralympians. *Frontiers in Psychology*, *8*. https://doi.org/10.3389/fpsyg.2017.01270
- Reverberi, E., D'Angelo, C., Littlewood, M. A., & Gozzoli, C. F. (2020, November 10). Youth Football Players' Psychological Well-Being: The Key Role of Relationships. *Frontiers in Psychology*, *11*. https://doi.org/10.3389/fpsyg.2020.567776
- Ridpath, D., Fattlar, D., & Yiamouyiannis, A. (2012). An Examination of NCAA Division I Football Bowl Championship Subdivision Department Revenues and Expenditures and Their Effect on Athletic Success in a Mid-Major Athletic Conference. *The Journal of SPORT*, *1*(1), 55–90. https://doi.org/10.21038/sprt.2012.0113
- Sarmento, H., Anguera, M. T., Pereira, A., & Araújo, D. (2018, January 3). Talent Identification and Development in Male Football: A Systematic Review. *Sports Medicine*, *48*(4), 907–931. https://doi.org/10.1007/s40279-017-0851-7
- Thelwell, R. C., Such, B. A., Weston, N. J. V., Such, J. D., & Greenlees, I. A. (2010, January). Developing mental toughness: Perceptions of elite female gymnasts. *International Journal of Sport and Exercise Psychology*, *8*(2), 170–188. https://doi.org/10.1080/1612197x.2010.9671941
- Zeiger, J. S., & Zeiger, R. S. (2018, February 23). Mental toughness latent profiles in endurance athletes. *PLOS ONE*, *13*(2), e0193071. https://doi.org/10.1371/journal.pone.0193071