

RELATIONSHIP OF GRIT AND RESILIENCE WITH PSYCHOLOGICAL WELL-BEING AMONG YOUNG FOOTBALL PLAYERS

Kaur G.^{1*}DOI: <https://doi.org/10.55968/ijems.v12i02.318>

^{1*} Guneet Inder Jit Kaur, Assistant Professor, Department of Sports Psychology, School of Sports Sciences, Central University of Rajasthan, Rajasthan, India.

Grit and resilience form the psychological concepts that are referred to as indices of mental fortitude and essential contributors to psychological well-being. Mental fortitude is an important facilitator of sports excellence which requires a wealth of mental strength to be functioning at optimal levels in stressful and demanding environments like the dynamic environment of team game of Football. Football is highly organized and competitive sport and India has been one of the youngest sporting nations in Football. The team sports form a social institution designed to help im-prove the health and wellness of the athletes and provide an opportunity for positive youth development. Thus, these young football athletes are not miniature elite athletes; they are a distinct client group to whom sport psy-chology practitioners (SPPs) increasingly deliver services. Unfortunately, the lacuna of research pertaining to the young athletes becomes a deterrent in the needs assessment of the young athletes. Therefore, the goal of the current research was to understand the psychological profile of young football players through investigating the relationship of grit and resilience and their impact on wellbeing. The sample included 35 young football players from Bangalore. The inter correlation between the three variables was assessed. As grit, resilience and psychological well-being are the distin-guishing factors of top performers in every field, their significant inter relationships have clarified the psychological profile of the young athletes. This understanding of psychological profile has implications on designing mental training modules for young football players.

Keywords: Grit, Resilience, Psychological well-being, Sports excellence, Mental fortitude, Youth Sports

Corresponding Author

Guneet Inder Jit Kaur, Assistant Professor,
Department of Sports Psychology, School of Sports
Sciences, Central University of Rajasthan, ,
Rajasthan, India.
Email: guneet@curaj.ac.in

How to Cite this Article

Guneet Inder Jit Kaur, RELATIONSHIP OF GRIT AND
RESILIENCE WITH PSYCHOLOGICAL WELL-BEING
AMONG YOUNG FOOTBALL PLAYERS. IJEMS.
2023;12(02):242-250.
Available From
<https://ijems.net/index.php/ijem/article/view/318>

To Browse



Manuscript Received
2023-02-09

Review Round 1
2023-03-09

Review Round 2
2023-03-16

Review Round 3
2023-04-12

Accepted
2023-04-26

Conflict of Interest
NIL

Funding
NO

Ethical Approval
YES

Plagiarism X-checker
13

Note



© 2023by Guneet Inder Jit Kaurand Published by The University Academics. This is an Open Access article licensed under a Creative Commons Attribution 4.0 International License <https://creativecommons.org/licenses/by/4.0/> unported [CC BY 4.0].



Introduction

The young athletes are the most dynamic and precious wealth of the nation. In the past few years there has been an increasing emphasis on harnessing the latent power of the young people at the local, state and national levels. As envisaged in the National Youth Policy (NYP-14), youth has to be encouraged and empowered to achieve their full potential. One of the priority areas identified for youth development is sports, as a means of skill development, employment, good health and for a healthy lifestyle. Youth sports, at the college and university level are designed to help improve the personal and social skills, health and wellbeing of the youth by providing an opportunity for positive development. Yet some stumbling blocks have also surfaced, such as over competitiveness, or even dropping out, or not enjoying physical activity.

Sports as a potential activity for youth development essentially needs the help of psychology for maintaining the interest and involvement of the young athletes. In sports,

Psychological training is vital, especially so at the highest levels wherein cognitive

Functions need to operate at the optimal levels, even more so under stressful conditions. This training provides the development of constructs to understand and withstand the multiple pressures and stressors on and off the field. Two such non-cognitive predictors of success in work, school, and other domains of life are grit and resilience. Research has shown the role of grit and resilience in fostering success and well-being through predicting academic outcomes, success at career, work engagement, positive leadership behaviors, sports-related engagement and higher levels of life satisfaction.

Grit

The construct of grit was developed to capture an essential part of the variance in successful outcome of academics and professionals not explained by concepts such as "IQ" and "Conscientiousness" [2]. It was postulated that certain characteristics (cognitive ability, creativity, vigor, emotional intelligence, charisma, self-confidence, emotional stability & physical attractiveness) are likely characteristics of high achieving individuals. Additionally, it was suggested

That some of the Big Five dimensions might be relevant and necessary for some careers but not others (for example, extraversion for a salesperson, though, irrelevant to a creative writer).

Pioneering researchers, thought so, and introduced the concept of grit. Grit is defined as "perseverance and passion for long-term goals". Grit entails working persistently toward challenges, upholding effort and concentration over years throughout hardships, setbacks and stagnancy. Gritty individuals view achievement as a long-term process; their lead is endurance, determination and stamina. Disappointment and/or boredom may indicate to many that it is time to modify one's trajectory, whereas gritty persons continue on track.

Gritty individuals sustain this effort and concentration over many years despite disappointments, failures and hardships while in development of their goal. The gritty individual characteristically finishes tasks at hand and pursues long-term goals.

Resilience

The indomitable quality where individual who faces life's difficulties, manages to get back up and returns sturdier than before to fight the events that are put in front of him/her. Instead of accepting defeat even when there is absolutely no possibility of a positive outcome, they still manage to show some or more resolve in gaining ground over difficulties.

It is described "as having high self-efficacy, self-esteem and a repertoire for problem-solving skills and satisfying interpersonal relationship". That would mean the resilient individuals are known to solve problems better than an average individual, have better perception of one and are content with their relationships. Many factors that make someone resilient have been identified by psychologists throughout the years which are optimism, ability to regulate or manage emotions, positive attitude and ability to see positivity even in failure as a helpful feedback. The resilient individuals are known to be having a strong viewpoint and look at most devastating news as having a silver lining. They also are resistant to stress and when things become rough for them, they can just soldier on. Their unique way of responding to adversity acts as a positive factor if they become physically or mentally ill. They

Have been known not to accept one's limit which in case may become non-compliant to treatment which is a risk factor.

Psychological well-being

Subjective well-being means that the people evaluate their lives by themselves but optimal human functioning is understood to signify psychological well-being. The theory that psychological, physical and social factors contribute to individual's happiness and contentment refers to Psychological well-being. This approach has been based in part on humanistic theories of positive functioning. Psychological well-being is thought to be achieved by having a balanced state which is neither affected by rewards or challenges of life. Psychological well-being comprises of good association with other individuals, a sense of resolution, independence, self-mastery, personal growth, meaning in life and development .

There are two methods to understand psychological well-being. The first is to differentiate positive and negative effects. Optimal psychological well-being and happiness are equilibrium between the two. The second approach emphasizes on life- satisfaction as the indicator of psychological well-being. To understand Psychological well-being it is critical to understand three disciplines in psychology. The first sub discipline is of personality, where Maslow's, Allport's and Roger's concept of self-actualisation, maturity to account for psychological well-being and fully functioning person can be implied, respectively. The second sub-discipline is abnormal psychology where the absence of mental illness can be understood as psychological well-being. The third is developmental psychology, where pattern of progression/growth across the span of life is understood as psychological well-being.

Review of Related Literature

Research has found that growth mindset and a task goal orientation have been significant predictors of higher levels of grit among male adolescent soccer players [9]. Among the student-athlete population, parenting involving psychological autonomy granting behaviours and grit have been found to be positively associated and it has been found to be negatively associated with burnout among athletes and mental health outcomes . This finding from research has highlighted the mediating role of grit in the relationship of parenting and mental health outcomes.

Another research found that the athletes who reported high levels of grit, resilience, social support and hardiness experienced more engagement in their sport, thus, also improving their quality of life.

In a study on ultramarathon runners on grit-perseverance, the short and medium distance group runners of the ultramarathon showed significant differences.

For an investigation of college athletes to explore the relationship of grit with depression, generalized anxiety and subjective cognitive complaints, a sample of 453 athletes in the age range of 18 to 23 years were selected. Results showed that grit had an influence on mood difficulties. It was further found that cognitive problems were reported by athletes possessing low levels of grit.

Gender differences have been found on grit among the collegiate track and field throwers. The interpretation of test scores on grit indicated the impact of overall performance on the motivational levels of athletes, which shifted from week to week. The female athletes have been found to be affected by external factors like stress, fear and drama. Anxiety has also been found to impact overall grit.

In the sports of fitness- Crossfit, the advanced crossfit athletes have shown higher levels of grit. Individuals high on grit tend to experience higher levels of perseverance of effort .

Grit has been shown to be related to three aspects of well- being: psychological well-being (PWB), satisfaction with life, and harmony in life.

Indian researchers have found that grit and vitality significantly predict flourishing among both men and women . In sports population (collegiate football players) too, grit and self-regulation has been shown to have a positive relationship with resilience . The research has contended that ambition is one of those variables closely associated with grit and resilience in the field of psychology.

Need of the study

The review of the exiting literature has shown that the young athletes form a very special sample. Immense literature on different athletes (elite/professionals) have shown the resilient and gritty athletes tend to be possess higher psychological well-being reducing the risk of dropout, exercise addiction and burnout.

However, as there exists immense lacunae in the research on young football players with respect to psychological variables, more so, Indian young football players, this study fills in this much needed gap and will be helpful in assessment, awareness, implications and forming interventions.

Thus, more emphasis for research is requirement of the hour. Their psychological make up, the ultimate deal breaker for success requires focus. As young athletes become the potential future athletes and thereby, role models, sports psychology can benefit from the research database of these athletes possessing an indomitable spirit.

The utmost needs are to look after the young players mental and physical health and make them role models for other athletes. Understanding the young football players psychological profile can aid Sports Psychologist in instituting more targeted feedback and interventions in order for Sports Specialist to get the most out of their athletic experience.

Purpose of the present study

In the present study, the aim was to understand the relationship of grit, resilience and psychological well-being among young football players. The major question was to understand if the young football players possessed grit and resilience and was there any relationship among the three variables in the present sample? Based on the review of literature and due to paucity of Indian researches on the selected sample and variables, the following null hypotheses were formulated: -

01. "There is no significant relationship between grit and resilience among young football players."
02. "There is no significant relationship between resilience and psychological well-being among young football players."
03. "There is no significant relationship between grit and psychological well-being among young football players."

Methodology

Sample

The total sample of the present study included 35 young football players, out of which 16 were females (45.7%) and 19 were males (54.3%). Purposive sampling method was used to select

The players in the age range of 15-21 years. The sample was collected across the sports academies in Bangalore. The players who were actively playing since a minimum of five years were selected in this study.

Instrument

Following standardized instruments were utilized in this study:

Short Grit Scale. The Short Grit Scale was developed by Angela Lee Duckworth and Patrick D. Quinn in 2009. It is a brief self-report version of the original Grit Scale [1]. It retains the two-factor structure of the original scale, the two factors being Perseverance of Effort and Consistency of Interest. Both the factors are found to be successful predictors of the construct of grit, which is trait level perseverance and passion for long term goals. The scale comprises of 8 items, rated on a 5 point rating scale from 1- not like me at all to 5- very much like me. There are 4 items each covered by both the factors. Out of 8 items, 4 items are reverse-keyed and for them, the scoring is reversed i.e. 1- very much like me to 5- not like me at all. The scoring is done separately for both the factors. The total score is obtained by combining the scores on the factors and then dividing it by eight. Thereby, making the maximum score achieved on this scale to be 5 (extremely gritty), and the lowest being 1 (not at all gritty). Each construct displays acceptable internal consistency, with alphas ranging from .73 to .83. The internal consistency of the Short Grit Scale has been found to be adequate ($\alpha=.82$). The scale displays predictive and consensual validity.

14 item Resilience Scale (RS-14). The 14 item Resilience Scale was developed by Wagnild and Young [21]. The RS-14 consists of 14 items. The main five characteristics of the resilience core are purpose, equanimity, perseverance, self-reliance, and existential aloneness (authenticity). All the items are positively scored, and the minimum score on the 14-item scale is 14 and the maximum score is 98. A score between 14 and 30 indicates very low resilience tendencies; a score between 31 and 48 indicates low resilience tendencies; a score between 49 and 63 indicates that average resilience tendencies; a score between 64 and 81 indicates moderate resilience level; a score between 82 and 98 indicates a moderately high resilience tendencies.

The Flourishing Scale (FS). The Flourishing Scale was developed by Diener and Biswas-Diener in 2009 [22]. It consists of 8 items ($\alpha = .85$) describing the significant facets of human functioning, including healthy relationships, competence, purpose and meaning in life. All items are phrased in positive direction. Scores can range between 8 and 56 (Strong Disagreement to Strong Agreement). High scores signify that respondents view themselves in positive relations in important areas of functioning. Although the scale does not distinctly give measures of facets of well-being, it does yield an indication of positive functioning across varied domains that are extensively believed to be significant. This scale possesses good psychometric properties and a high reliability.

Design

A correlational research design was utilized in the present study to understand the relationship of grit and resilience with psychological well-being among young football players. For this study, different sports academies were approached to identify and select the young football players who were undergoing training. With the consent of the concerned sports academy/Coaches and respective athletes who fit the present research sample criteria, they were approached via telephone/email. They were briefed about the research objective. Using Google forms, Informed Consent, Socio-Demographic Sheet, short grit scale, resilience scale, and flourishing scale were administered and assessment was done. The descriptive statistics (means and SDs) and Shapiro Wilk test of normality was used to ascertain the normal distribution of the data. Further on, non-parametric inferential statistics (Spearman Rho) were used to assess the data as the sample was not found to be normally distributed.

Results

The aim of the present study was to investigate the relationship of grit and resilience with psychological well-being among young football players. For this purpose, a total sample of 35 young players (16 females and 19 males) undergoing training were selected from various sports academies in Bangalore.

The descriptive statistics of Means and standard deviations for the total sample with respect to the three variables viz.

Grit, Resilience and Psychological well-being are presented in the Table 1.

Table 1. Mean and Standard Deviation of grit, resilience and psychological well-being among young football players (N=35).

Enclosed as Annexure 01

For grit, the mean is 3.31 and the S.D. is 0.60. The mean of resilience is 78.43 with S.D. of 21.14. The mean and S.D. of psychological wellbeing are 44.57 and 13.23 respectively. The means are above average on grit, resilience and psychological well-being indicating that the young football players are gritty, moderately resilient and having a positive functioning across domains of well-being.

Table 2. Shapiro-Wilk test of normality for Grit, Resilience and Psychological Wellbeing amongst young football players

Enclosed as Annexure 02

Table 2 shows the results of the Shapiro-Wilk test of normality for the three psychological variables. The p value obtained for Resilience and psychological wellbeing is .00, which is lesser than .05 level of significance, indicating that the data is not normally distributed. Though, the p value of .724 for grit is higher than .05 level of significance, since the other two variables are not normally distributed, Spearman's rank correlation coefficient is used.

Table 3. Correlation Coefficient Matrix (Spearman's Rho) for Grit, Resilience and Psychological Wellbeing amongst young football players (N=35).

Enclosed as Annexure 03

The Table 3 shows the correlation (Spearman's rho) between grit and resilience among young football players. The correlation coefficient value is 0.37, which is significant at 0.05 level of significance. This means, there is a significant positive relationship between grit and resilience. Hence, it signifies that an increase in grit can also increase player's resilience and vice versa. Thus, the null hypothesis is rejected which states that "there is no significant relationship between grit and resilience among young football players."

The correlation coefficient of resilience and psychological well-being amongst young football players is 0.502, which is significant at

0.01 level of significance. This means, there is a significant positive relationship between psychological well-being and resilience amongst young football players. Thus, the second hypothesis is rejected stating that, "there is no significant relationship between resilience and psychological well-being among young football players."

However, the third hypothesis is accepted which states that "there is no significant relationship between grit and psychological well-being among young football players" as the correlation coefficient of grit and psychological well-being amongst young football players is 0.002, which is not significant.

Findings & Discussions

Achievement in any field is interplay of mental agility, determination, focus and an unimpeded vision of the performance outcome. Review of related literature has shown that resilience is a crucial component of athletic performance, particularly for the growth of football success. Grit and psychological well-being have been highlighted as factors necessary for the attainment of sports excellence, by facilitating the acquisition of skills, enabling individuals to invest the requisite time to practice and stay committed to the development process. As sports excellence calls for the honing of the mental potentialities in order to perform the best, it involves the grit enabling synergy of the resilient physical and mental components and thus promises exactitude in terms of performance and well-being. This kind of peak performance is exceptional, exhilarating and transcends ordinary levels of functioning.

The findings of the current study are in line with the previous researches. The significant positive correlations between grit and resilience have been found to be imperative indicators of sporting achievement. In a study with 75 wheelchair basketball players (74 males and 1 woman) on grit, hardiness, and resilience and their role in prediction of both general and sport-specific quality of life, it was found that hardiness and resilience both contributed significantly to variation in quality of life. Resilience and grit contributed for noteworthy variation, which accounted for 22% of the variance in sport participation. Athletes who reported having the greatest grit and resilience also tended to be the most dedicated to their sport, and those who had these traits also rated their quality of life

As being the best. On an average, Football players, both young and professional/elite have been found to possess higher grit (3.78 to 3.99), which is also found in the present study (Table 1). As Football is one of the most popular sports worldwide, it brings immense challenge and competition for its players, wherein, in order to achieve the elite level, each player must develop the mindset of upskilling and growth. Thus, making the players gritty and passionate for the game.

A strong positive significant correlation has been found between resilience and psychological well-being in the present study. Previous researches have shown that resilience is positively correlated with markers of good psychological wellness and negatively correlated with markers of poor mental health. Further, resilience has been found to be a protective and relevant factor for psychological well-being among elite footballers during the pandemic period.

To conclude, the present study has highlighted the significant positive correlations between grit and resilience and further resilience and psychological well-being among young football players. These findings are indeed promising and have implications with respect to providing an important research base relevant to the young football players in India. Workshops, awareness programs and training programs for different stakeholders could be initiated in this area so as to develop/sustain/enhance the mental fortitude of the young football players. Nevertheless, this study is a humble attempt in the area and future studies could utilize larger sample size and different variables (coaching style, personality, goal orientation). Intervention studies and longitudinal studies could be undertaken by future studies.

Annexure

Annexure 01

7

Table 1. Mean and Standard Deviation of grit, resilience and psychological well-being among young football players (N=35).

Variables	Mean	SD
Grit	3.31	0.60
Resilience	78.43	21.14
Psychological well-being	44.57	13.23

Annexure 02

Table 2. Shapiro-Wilk test of normality for Grit, Resilience and Psychological Wellbeing amongst young football players (N=35).

Variables	Statistic	Df	Significance
Grit	.98	35	.724
Resilience	.79	35	.000
Psychological well-being	.76	35	.000

Annexure 03

Table 3. Correlation Coefficient Matrix (Spearman's Rho) for Grit, Resilience and Psychological Wellbeing amongst young football players (N=35).

Variables	Grit	Resilience	Psychological well-being
Grit			
Resilience		.37*	.002
Psychological well-being			.502**

*. Correlation is significant at the 0.05 level (2-tailed).
 **. Correlation is significant at the 0.01 level (2-tailed).

Reference

- Duckworth, A. L. , Peterson, C. , Matthews, M. D., & Kelly, D. R.: *Grit: Perseverance and passion for long-term goals*. *Journal of Personality and Social Psychology*, 92(6), 1087–1101 (2007). doi:10.1037/0022-3514.92.6.1087 [Crossref][Google Scholar]
- Sending, V. : Thinking success, behaving successfully: The relation between hypothetical thinking strategies, effort towards goal attainment and grit (Unpublished master's thesis). Arctic University of Norway, Norway (2014). [Crossref][Google Scholar]
- Druss, R. G. , & Douglas, C. J. *Adaptive responses to illness and disability. Healthy denial. General Hospital Psychiatry*, 10, 163-168 (1988) [Crossref][Google Scholar]
- Ong, A. D. , Bergeman, C. S. , Bisconti, T. L., & Wallace, K. A.: *Psychological resilience, positive emotions, and successful adaptation to stress in later life*. *Journal of Personality and Social Psychology*, 91(4), 730 (2006) [Crossref][Google Scholar]
- Ryan, R. M. , & Deci, E. L. : *Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being*. *American Psychologist*, 55, 68–78 (2000) [Crossref][Google Scholar]
- Ryan, R. M. , & Deci, E. L. : *On happiness and human potentials: A review of research on hedonic and eudaimonic well-being*. *Annual Review of Psychology*, 52, 141–166 (2001) [Crossref][Google Scholar]
- Ryff, C. D. , & Keyes, C. L. M.: *The structure of psychological well-being revisited*. *Journal of Personality and Social Psychology*, 69(4), 719-727 (1995) [Crossref][Google Scholar]
- Ryff, C. D. : Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57(6), 1069-1081 (1989). [Crossref][Google Scholar]
- Albert, E. , Petrie, T. A. , & Moore, E. W. G.: *The relationship of motivational climates, mindsets, and goal orientations to grit in male adolescent soccer players*. *International Journal of Sport and Exercise Psychology*, 19(2), 265–278 (2021) [Crossref][Google Scholar]
- Howard, J. M. , Nicholson, B. C. , Madson, M. B., Mohn, R. S., & Bullock-Yowell, E.: *Exploring Student-Athlete Grit as a Mediator in the Relationships Between Parenting, Academic Success, and Mental Health Outcomes*. *Journal of Clinical Sport Psychology*, 1(aop), 1-21 (2021) [Crossref][Google Scholar]
- Atkinson, F. , & Martin, J. : Gritty, hardy, resilient, and socially supported: A replication study. *Disability and Health Journal*, 13(1), Article 1008392 (2020). [Article][Crossref][Google Scholar]
- Cousins, J. M. , Peterson, M. J. , Christopher, A. N., Francis, A. P., & Betz, H. H.: *Grit and ultramarathon running*. *Medicine & Science in Sports & Exercise*, 52(7S), 126–126 (2020). [Article][Crossref][Google Scholar]
- Crane, A. , DaCosta, A. , Webbe, F. , & Logalbo, A. : *Grit predicts depression, anxiety, and subjective cognitive complaints despite normal cognitive performance in college athletes*. *Archives of Clinical Neuropsychology*, 35(5), 606–606 (2020). [Article][Crossref][Google Scholar]
- Criticos, M. , Layne, T. , Simonton, K. , & Irwin, C. : *Gender differences with anxiety, perceived competence, and grit in collegiate track and field throwers*. *Journal of Physical Education and Sport*, 20(5), 2751-2759 (2020) [Crossref][Google Scholar]
- Cazayoux, M. , & DeBeliso, M. : Effect of grit on performance in CrossFit in advanced and novice athletes. *Turkish Journal of Kinesiology*, 5(1), 28–35 (2019). [Article][Crossref][Google Scholar]
- Datu, J. A. , Valdez, J. P. , & King, R. B.: *The successful life of gritty students: Grit leads to optimal educational and well-being*

Outcomes in a collectivist context. In The psychology of Asian learners (pp. 503-516). Springer, Singapore (2016) [Crossref][Google Scholar]

Vainio, M. M. , & Daukantaitė, D. : Grit and different aspects of well-being: Direct and indirect relationships via sense of coherence and authenticity. *Journal of Happiness Studies*, 17(5), 2119-2147 (2016) [Crossref][Google Scholar]

Padhy, M. , Hariharan, M. , Mutnury, S. L. , & Mukherjee, O.: *Flourishing: Role of Perseverance and Passion for Long-Term Goals in Relation to Subjective Vitality. International Journal of Health Sciences and Research*, 11(6), 6-12 (2021) [Crossref][Google Scholar]

Gupta, S. , & Sudhesh, N. T. : Grit, self-regulation and resilience among college football players: a pilot study. *International Journal of Physiology, Nutrition and Physical Education*, 4, 843-848 (2019) [Crossref][Google Scholar]

Shobanah, K. R. & Naachimuthu, K. P. : *A study on grit among MBA, MBBS and engineering students. International Journal of Education and Psychological Research*, 6(2), 37-43 (2017) [Crossref][Google Scholar]

Wagnild, G. M. , & Young, H. M. : *Development and psychometric evaluation of the Resilience Scale. Journal of nursing measurement (1993) [Crossref][Google Scholar]*

Diener, E. , Wirtz, D. , Biswas-Diener, R. , Tov, W. , Kim-Prieto, C., Choi, D. W.,...Oishi, S.: *New measures of well-being. Assessing Well-Being*, 247-266 (2009) [Crossref][Google Scholar]

Gupta, S. , & Sudhesh, N. T. : Grit, self-regulation and resilience among college football players: a pilot study. *International Journal of Physiology, Nutrition and Physical Educ*, 4(1), 843-848 (2019) [Crossref][Google Scholar]

Singh, M. , Kadhim, M. M. , Turki Jalil, A. et al. *A systematic review of the protective effects of silymarin/silibinin against doxorubicin-induced cardiotoxicity. Cancer Cell Int* 23, 88 (2023). <https://doi.org/10.1186/s12935-023-02936-4> <https://cancerbiomedcentral.com/articles/10.1186/s12935-023-02936-4> [Article][Crossref][Google Scholar]

Mandeep Singh Nathial, Analysis of set shot in

Basketball in relation with time to perform the course and displacement of center of gravity, *American Journal of Sports Science*, Vol. 2 Issue. 5 pp: 122-126 (2014). Retrieved from <https://www.sciencepublishinggroup.com/journal/paperinfo.aspx?journalid=155&doi=10.11648/j.ajss.20140205.13> [Crossref][Google Scholar]

Mohan, J. & Kaur, G. I. J. : *The Role of Grit and Self Efficacy in Academic and Sports Excellence: A Comparative Study. Indian Journal of Psychology, January Issue*, 38-43 (2015) [Crossref][Google Scholar]

Mohan, J. & Kaur, G. I. J. : *The role of grit and flow in sports excellence. Indian Journal of Psychology*, 136-42 (2016) [Crossref][Google Scholar]

Kaur, G. I. J. & Kakkar, P. : *Grit: The unflinching spirit of excellence. Indian Journal of Psychology, Special Issue on Sports Psychology*, 73-78 (2017) [Crossref][Google Scholar]

Mohan, J. & Kaur, G. I. J. : *The Role of Emotional Intelligence and Grit in Sports Excellence. Proceedings of UGC Sponsored National Conference on Sport Psychology: Advances in Technology, Training Methodology and Measurements, Maharashtra (2016) [Crossref][Google Scholar]*

Kaur, G. I. J. & Kakkar, P. : *Sports Excellence in relation to Grit and Flow. In J. Mohan and M. Sehgal (Eds.). Idea of Excellence: Multiple Perspectives (pp. 317-330). Chandigarh: Panjab University Press (2016) [Crossref][Google Scholar]*

O'Sullivan, S. : *Peak Performance. [Web log post]. Retrieved from http://www.inspiringexcellence.ie/peak-performance.html (2015, March 13) [Crossref][Google Scholar]*

Martin, J. J. , Byrd, B. , Watts, M. L., & Dent, M.: *Gritty, hardy, and resilient: Predictors of sport engagement and life satisfaction in wheelchair basketball players. Journal of clinical sport psychology*, 9(4), 345-359 (2015) [Crossref][Google Scholar]

Sigmundsson, H. , Clemente, F. M. , & Loftesnes, J. M.: *Passion, grit and mindset in football players. New Ideas in Psychology*, 59, 100797 (2020) [Crossref][Google Scholar]

SINGH SIDHU, A. , & SINGH, M. (2022). *KINEMATICAL ANALYSIS OF HURDLE CLEARANCE TECHNIQUE IN 110M HURDLE RACE.*

International Journal of Behavioral Social and Movement Sciences, 4(2), 28–35. Retrieved from [Article][Crossref][Google Scholar]

Singh, A. , & Singh , D. M. (2013). PROMOTION OF RESEARCH CULTURE –ENHANCING QUALITY IN HIGHER EDUCATION. *International Journal of Behavioral Social and Movement Sciences*, 2(2), 202–208. Retrieved from [Article][Crossref][Google Scholar]

SINGH, M. , & SINGH SIDHU, A. (2016). A COMPARATIVE STUDY OF BODY COMPOSITION AND RELATIVE HEALTH STATUS AMONG RESIDENT AND NON-RESIDENT STUDENTS IN DIFFERENT SCHOOLS OF J&K. *International Journal of Behavioral Social and Movement Sciences*, 5(3), 08–13. Retrieved from [Article][Crossref][Google Scholar]

Singh Nathial, D. M. (2012). ANALYZING THE CREDIT BASED SYSTEM IN PHYSICAL EDUCATION. *International Journal of Behavioral Social and Movement Sciences*, 1(3), 172–176. Retrieved from [Article][Crossref][Google Scholar]

SHARMA, N. P. , & SINGH, M. (2014). SENIOR AGE GROUP RELATIVE EXERCISES AND IMPACT ON THEIR LIFESTYLE. *International Journal of Behavioral Social and Movement Sciences*, 3(04), 78–82. Retrieved from [Article][Crossref][Google Scholar]

CHAND PURI, P. , MISHRA, P. , JHAJHARIA, B. , & SINGH, M. (2014). COORDINATIVE ABILITIES OF VOLLEYBALL IN DIFFERENT AGE GROUPS: A COMPARATIVE STUDY. *International Journal of Behavioral Social and Movement Sciences*, 3(3), 56–68. Retrieved from [Article][Crossref][Google Scholar]

Sigmundsson, H. , Haga, M. , & Hermundsdottir, F. : The passion scale: Aspects of reliability and validity of a new 8-item scale assessing passion. *New ideas in psychology*, 56, 100745 (2020a) [Crossref][Google Scholar]

Hu, T. , Zhang, D. , & Wang, J. : A meta-analysis of the trait resilience and mental health. *Personality and Individual differences*, 76, 18–27 (2015) [Crossref][Google Scholar]

Madsen, E. E. , Krstrup, P. , Larsen, C. H., Elbe, A. M., Wikman, J. M., Ivarsson, A., & Lau-tenbach, F.: Resilience as a protective factor

For well-being and emotional stability in elite-level football players during the first wave of the COVID-19 pandemic. *Science and Medicine in Football*, 5(sup1), 62-69 (2021) [Crossref][Google Scholar]