

**INFLUENCE OF MENTAL TOUGHNESS ON THE PERFORMANCE OF
STUDENT- ATHLETES; IN THE UNIVERSITY OF BENIN**

BY

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FACULTY OF EDUCATION

UNIVERSITY OF BENIN

BENIN CITY

FEBRUARY, 2026

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**RESEARCH PROJECT SUBMITTED TO DEPARTMENT OF
HUMAN KINETICS AND SPORT SCIENCE, FACULTY OF
EDUCATION, IN PARTIAL FULFILMENT OF THE
REQUIRMENTS FOR THE AWARD OF B.Sc. (ED) IN HUMAN
KINETICS AND SPORT SCIENCE
UNIVERSITY OF BENIN,
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FEBRUARY, 2026

CERTIFICATION

We, the undersigned, certify that this project work was carried out by **OSAWARU OMOYE VICTORY** with matriculation number **EDU2102477** in the Department of human kinetics and sport science, Faculty of Education, University of Benin, Benin City.

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DEDICATION

This work is dedicated to God Almighty, my strength and protector over the years. I render sincere thanks to God Almighty for keeping me alive and giving me the grace to carry on in tough times and making it possible for me to undertake this research.

ACKNOWLEDGEMENTS

The researcher is most grateful to God Almighty for his mercy, guidance, blessings and wisdom bestowed upon her during her degree programme. Her honest gratitude goes to her wonderful supervisor, Mrs. Celine S. Abayomi for her kindness, patience and unlimited contributions offered me, God bless you ma. Special thanks goes to her mother Mrs Augustina Idemudia for her persistent love and care for her. May God continue to bless her.

To her friend s Gbenga, Tega and Favour for being there for her

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ABSTRACT

This study was designed to diagnose influence of mental toughness on the performance of student-athletes; in the university of Benin.. The purpose of the study was to investigate the influence of mental toughness on student-athletes; The study adopted survey research design. The study made use of questionnaire to obtain data from respondent. Five objectives were raised for the study. The study made use of questionnaire to obtain data from respondent. three objectives were raised for the study. The result showed that mental toughness significantly influences the performance of student-athletes. The study also showed a positive and statistically significant correlation implying that as mental toughness increases, so did performance indicators such as endurance, tactical execution, and competitive composure. Based on the findings of the study, it was recommended among others that The University of Benin Sports Unit should formally integrate mental skills training into regular training programs for student-athletes. Techniques such as goal setting, visualization, positive self-talk, concentration drills, and stress-management strategies should be taught alongside physical and technical training to enhance mental toughness and overall athletic performanc

CHAPTER ONE

INTRODUCTION

Background of the study

Sports play an important role in modern society, contributing to physical development, social cohesion, entertainment, and national identity. At the university level, sports are especially significant because they serve as a platform for developing young athletes who must balance competitive performance with academic responsibilities. As the demands of competitive university sports rise, researchers increasingly highlight that physical training alone is insufficient for consistent high performance. Instead, psychological factors such as resilience, confidence, focus, and stress management have become central to determining athletic success (Gucciardi et al., 2015; Lin et al., 2017).

One psychological construct that has gained strong attention in recent years is mental toughness. Contemporary research describes mental toughness as a set of psychological attributes that enable athletes to remain confident, focused, and resilient when facing pressure, challenges, or adversity in competitive environments (Cowden, 2017). Although earlier models exist, recent sport psychology literature continues to draw on the 4Cs Model of Mental Toughness, which conceptualizes mental toughness through four core components—Control, Commitment, Challenge, and Confidence—

and applies these dimensions in modern assessments and athlete development programs (Crust & Clough, 2011; Sarkar & Fletcher, 2017). Control refers to an athlete's ability to regulate emotions and remain composed under pressure. Commitment reflects dedication, perseverance, and the ability to stay on task despite obstacles. Challenge relates to viewing setbacks as opportunities for growth rather than threats. Confidence involves belief in one's abilities to succeed, even when facing difficult situations.

Recent empirical findings support the relevance of these components. Studies conducted between 2017 and 2024 consistently show that athletes with high levels of mental toughness—particularly strong confidence and emotional control—perform better, recover more quickly from failure, and maintain composure in high-pressure situations (Mahoney et al., 2022; Anthony et al., 2020). Reviews further demonstrate that mental toughness is moderately and positively associated with performance outcomes across different sports, including those at the university level (Slimani et al., 2016; Vaughan et al., 2024).

For university athletes, mental toughness is especially important because they face unique stressors compared to professional athletes. These include balancing academic workloads, managing time constraints, navigating limited resources, and coping with competitive pressure. Research shows that such stressors often lead to burnout,

anxiety, and inconsistent performance when mental toughness levels are low (Morris et al., 2021). Conversely, mentally tough student-athletes demonstrate better coping skills, improved motivation, greater resilience, and more stable performance patterns throughout a competitive season (Cowden, 2017; Vaughan et al., 2024).

Although global research on mental toughness has grown substantially, studies focusing on African or Nigerian university athletes remain limited. This gap is significant, considering that the environmental, economic, and institutional contexts of Nigerian universities differ from Western settings where most mental toughness research is conducted. As a result, there is a need for localized investigations that explore how mental toughness influences performance within Nigerian university sports systems.

Therefore, this study seeks to examine the influence of mental toughness—using the 4Cs model as a guiding framework—on the performance of student-athletes at the University of Benin (UNIBEN). By assessing the relationships between control, commitment, challenge, confidence, and actual performance outcomes, the study aims to provide evidence-based insights that can support coaches, sports psychologists, and university administrators in developing psychological training programs to enhance student-athlete performance.

Statement of the Problem

Athletic performance is often perceived as a direct outcome of physical talent, skill, and training. However, recent research has shown that psychological factors, particularly mental toughness, significantly influence an athlete's ability to perform consistently and succeed in competitive environments. In UNIBEN, many student-athletes show great potential during training sessions but fail to replicate the same level of performance during competitions.

Factors such as lack of confidence, poor focus, anxiety, fear of failure, and inability to handle pressure may contribute to these inconsistent performances. Moreover, student-athletes juggle demanding academic schedules alongside rigorous sports commitments, which can increase stress and affect their performance levels negatively.

Currently, there is limited empirical research on the mental toughness levels of UNIBEN student-athletes and how it affects performance. Without this knowledge, coaches and sports administrators may struggle to implement strategies that enhance psychological readiness. This study, therefore, seeks to address this gap by investigating the influence of mental toughness on the performance of student-athletes in UNIBEN.

Purpose of the Study

The primary purpose of this study is to investigate the influence of mental toughness on the performance of student-athletes at the University of Benin (UNIBEN). In recent years, mental toughness has been recognized as one of the most critical psychological factors that determine success in sports. While physical training, skill acquisition, and proper conditioning are essential for athletic success, they may not be sufficient for consistent high-level performance, particularly in competitive sports where pressure, expectations, and stress are high.

Many student-athletes at UNIBEN possess the physical talent and technical abilities needed to excel; however, their performance often fluctuates during high-stakes competitions. This inconsistency suggests that psychological factors, especially mental toughness, may play a vital role in determining whether an athlete performs optimally or underperforms when it matters most.

This study, therefore, seeks to achieve the following purposes:

To examine the level of mental toughness among student-athletes in UNIBEN across various sports disciplines such as football, basketball, athletics, and swimming.

To analyze the relationship between mental toughness and athletic performance, identifying whether higher mental toughness correlates with better and more consistent performance.

To generate evidence-based recommendations for coaches, sports administrators, and athletes on strategies for enhancing mental toughness through targeted psychological training and interventions.

By achieving these purposes, the study aims to bridge the gap between physical preparation and psychological readiness. The ultimate goal is to provide valuable insights that will help student-athletes cope with competitive stress, balance academic and athletic demands, and represent UNIBEN successfully in local, regional, and national competitions such as the Nigerian University Games Association (NUGA) tournaments.

Research Questions

This study seeks to provide answers to the following research questions:

1. What is the influence of mental toughness on the performance of students-athletes in the university of Benin?
2. What is the level of mental toughness among student-athletes at the University of Benin?

3. What is the relationship between mental toughness and athletic performance among student-athletes?

4 What strategies can be adopted to enhance the mental toughness of UNIBEN student-athletes?

Significance of the Study

This study is important because it examines the role of mental toughness in improving the performance of student-athletes at the University of Benin. The findings will benefit the following groups:

- Student-Athletes: Help them understand how mental toughness impacts performance and provide strategies to cope with pressure and perform consistently.
- Coaches and Trainers: Offer insights for integrating psychological training with physical preparation to build more resilient and focused athletes.
- Sports Administrators: Guide policies and resource allocation for athlete support programs and performance improvement initiatives.
- Researchers: Contribute to the limited body of sports psychology research in Nigeria and serve as a foundation for future studies.

- National Sports Development: Highlight the importance of mental preparation in boosting Nigeria's performance at local and international competitions.

Scope and Delimitation of the Study

This study focuses on registered student-athletes of the University of Benin (UNIBEN) who actively participate in competitive sports such as football, basketball, volleyball, athletics, and swimming. It examines the relationship between mental toughness and athletic performance using Clough et al.'s 4Cs Model of Mental Toughness — Control, Commitment, Challenge, and Confidence.

The research is delimited to athletes representing the university in official competitions such as the Nigerian University Games Association (NUGA). Data will be collected through standardized questionnaires and performance records from coaches. Recreational or non-competitive athletes are excluded from this study.

Geographically, the study is restricted to the University of Benin, and findings may not fully generalize to athletes in other universities or regions. Additionally, since the study relies on self-reported data, responses may be influenced by personal bias or misinterpretation of questions.

Limitations of the Study

While this study aims to provide valuable insights, certain limitations are anticipated:

1. Self-Reported Data: The study relies partly on questionnaires, which may be affected by bias or inaccurate responses from participants.

2. Sample Size and Location: The research is limited to student-athletes at the University of Benin, which may restrict the generalization of findings to other universities or regions.

3. Performance Measurement: Performance will be measured using available records and coach evaluations, which may not capture all aspects of athletic performance.

Operational Definition of Terms

1. Mental Toughness:

The psychological strength that enables an athlete to remain focused, resilient, and confident under pressure, allowing them to perform consistently despite challenges or setbacks.

2. Performance:

The measurable outcome of an athlete's participation in sports, including competition results, skill execution, and coach evaluations.

3. Student-Athletes:

Students of the University of Benin who actively represent the institution in organized, competitive sports events.

4. 4Cs Model of Mental Toughness:

A framework developed by Clough et al. (2002) that defines mental toughness using four key components — Control, Commitment, Challenge, and Confidence.

4. Competitive Sports:

Organized sporting activities where individuals or teams compete against others to achieve victory or rankings, such as NUGA games.

CHAPTER TWO

REVIEW OF RELATED LITERATURE.

This chapter presents review of related literature and it is discussed under the following Sub-headings.

- Theoretical framework
- Conceptual review
- Concept of Mental Toughness
- Importance of Mental Toughness
- Mental Toughness and Athletic Performance
- The Predictive Role of Psychological Skills in Mental Toughness of Students-Athlete
- Mental Toughness Characteristics of student athletes
- 4c model and athlete performance
- Control and Its Relevance to Performance
- Empirical Evidence Supporting the 4C Model
- Applications of the 4C Model in Coaching and Training
- Effect of mental toughness on sporting performance
- Determinants of Mental Toughness in Student- Athletes
- Empirical Literature

Theoretical Framework

Mental toughness in student-athletes is supported by theories linking psychological attributes to performance, such as the idea that it involves traits like control, commitment, and self-confidence, which help athletes cope with stress and pressure. These theories emphasize that mental toughness is not an innate trait but can

be developed through psychological and physical training, self-awareness, and an athlete's environment. It is crucial for both athletic and academic performance, and its development is tied to life skills that are transferable to other contexts.

This study is grounded on Self-Determination Theory (SDT) Perspective propounded by Edward L. Deci and Richard M. SDT is rooted in humanistic psychology, drawing on the works of psychologists such as Abraham Maslow and Carl Rogers, who emphasized self-actualization and personal growth. Deci and Ryan (1985) argued that human beings are naturally inclined to learn, explore, and seek challenges when the social environment supports their psychological needs. Self-Determination Theory (SDT) is a comprehensive framework that explains human motivation and personality through the fulfillment of fundamental psychological needs. , SDT emphasizes the role of autonomy, competence, and relatedness in fostering intrinsic motivation and psychological well-being. SDT organizes its principles into six mini-theories, each addressing a specific aspect of motivation and personality development:

1. Cognitive Evaluation Theory (CET): Explains how external rewards and feedback influence intrinsic motivation.
2. Organismic Integration Theory (OIT): Describes how external motivation can become internalized through self-regulation.

3. Causality Orientations Theory (COT): Explores individual differences in motivational orientation—autonomous, controlled, or impersonal.
4. Basic Psychological Needs Theory (BPNT): Identifies the three essential psychological needs of autonomy, competence, and relatedness.
5. Goal Contents Theory (GCT): Distinguishes between intrinsic goals (personal growth, affiliation) and extrinsic goals (wealth, fame).
6. Relationships Motivation Theory (RMT): Emphasizes the importance of supportive relationships in sustaining motivation and well-being.

The Self-Determination Theory (SDT) thus, offers a robust explanation for human motivation, emphasizing the importance of autonomy, competence, and relatedness in fostering intrinsic motivation and psychological health. In educational and athletic settings, it provides a valuable guide for creating supportive environments that nurture persistence, performance, and well-being. For student-athletes, SDT not only enhances performance but also contributes to the development of mental toughness, resilience, and long-term engagement. Despite its limitations, SDT remains one of the most influential and empirically supported frameworks in modern psychology

Conceptual Review

In the realm of competitive sports and academic pursuit, student-athletes face unique physical, emotional, and psychological challenges. Balancing rigorous academic requirements with the pressures of athletic performance requires not only

skill and endurance but also psychological resilience. One of the most critical psychological attributes that enable student-athletes to excel under pressure is mental toughness. The conceptual framework of mental toughness has evolved significantly over the past two decades. Clough et al. (2022), influential definition characterizes it as a personality trait determining responses to competitive pressure, while Jones et al. (2022), subsequent refinement emphasizes the consistency of high-level performance under varying conditions. More recently, Loehr et al. (2021), expanded conceptualization incorporates elements of comparative advantage and situational adaptation, providing a more nuanced understanding of this psychological construct.

Researchers thus, conceptualize MT in several overlapping ways, often emphasizing control, commitment, confidence and challenge (the “4Cs”). According to Hanton, & Connaughton, (2022) Mental toughness refers to a psychological quality that enables individuals to persevere and perform optimally in the face of adversity. It embodies attributes such as resilience, confidence, determination, and emotional control (Jones,. While the concept originated in elite sports psychology, it has expanded to other performance domains, including education, business, and the arts. Mental toughness has been recognized as a key determinant of success in sports and academic contexts because it influences how individuals respond to challenges, setbacks, and competitive stressors (Gucciardi, Hanton, & Fleming, 2017). For

student-athletes, mental toughness helps in maintaining focus, confidence, motivation, and emotional stability both in academic and athletic settings (Cowden, 2017).

Jones et al. (2021) defined mental toughness as “having the natural or developed psychological edge that enables you to cope better than your opponents with the many demands that sport places on a performer.” Clough, Earle, and Sewell (2021) later conceptualized the construct using the 4Cs model Control, Commitment, Challenge, and Confidence forming one of the most influential frameworks in understanding mental toughness. For student-athletes, mental toughness involves the ability to manage dual pressures from both academics and athletics. It helps them stay composed during examinations, maintain motivation during training, and recover quickly from poor performances or academic setbacks (Crust & Clough, 2021).

According to Coulter, Mallett, & Gucciardi (2020) an individual’s mental toughness can be assessed in a way how an individual faces the difficulty of achieving his or her life goals consistently. As such, mental toughness can be referred to as the presence of several values, attitudes, emotions, thoughts, and behaviours that influence an individual's way of approaching, responding to and evaluating negative and positive pressures and challenges. Based on the study of Gucciardi et al. (2015), mental toughness is a psychological source that is functional, flexible and efficient towards an effort directed at an individual's goals and mental toughness can be termed

as an umbrella terms that includes the construction of positive psychology. A student-athlete who has a strong mentality, they will always be confident to achieve victory in many things in life compared to those who are weak and always think negative.

In sports, most athletes and coaches identify mental toughness as the main factor that can contribute to the performance of a sport. According to Weinberg, Freysinger, Mellano, & Brookhouse (2016), the mental toughness possessed by an individual or athlete is a key psychological characteristic associated with success in sports. Every coach and manager of a team needs to be aware to build the athlete's skills to a higher level of sports performance through preparation for the mental and physical strength of the athletes. Psychological researchers argue that mental toughness is an individual's personal ability that enables athletes to perform to the best of their ability regardless of the circumstances they face, always being positive such as trying to win, preventing negative attitudes such as avoiding injury, or giving them the opportunity to learn new skills (Gordon & Gucciardi, 2021). Therefore, every student- athlete needs to understand in depth about the concept of mental toughness in ensuring that every action they take is always positive towards the efforts and challenges faced to ensure that students-athletes succeed in achieving the goals that have been determined.

Mental toughness (MT) is thus considered to be a multifaceted psychological construct constituting cognitive, affective, and behavioural dimensions (Connaughton

and Hanton, 2023;). This concept is associated with increased stress resilience, successful stress management, and psychological well-being (Gerber et al., 2022). Clough et al. (2021) affirmed that mental toughness is composed of subscales of challenge (associated with performing well in challenging situations), commitment (not giving up under pressure), life, emotional control (perceived high control over the outcomes of one's performance), confidence in abilities, and interpersonal confidence (associated with unshakable belief in abilities).

In Nigeria, the perceptions and concerns of society, parents, and students on the academic achievement of children and students still exist when their children and students are involved in sports. Based on Ekeke's study (2014), the community's concern, especially parents and guardians on their children's academic achievement has existed since the beginning of school and their children's involvement in sports further increases the perception and negative views of society and parents on academic achievement and sports.

This is because excessive student-athlete involvement in sports and co-curriculum can cause the academic achievement of students-athletes is not encouraging. In addition, there are some studies have found the involvement of student-athletes Malay participate actively in sports and co-curricular activities in schools, colleges and universities have academic achievement (CPA), which is low

compared with the student-athletes not wither (Nor Martin, Mona Riza, Sevia, Nik Noordini, 2016). This situation will further raise the perception of the community, parents, and students on the involvement of students-athletes in sports and co-curriculum that can have a negative impact on academic achievement.

Importance of Mental Toughness

Over the past few years, coaches in every sport are awakening to the importance of athletes who are considered mentally tough. For example, Gould et al. (2017) found 8~% of coaches' ranked mental toughness as the most important mental attribute in determining success in wrestlers. In the same study, Gould et al. (2024) found that 9~/o of the coaches who felt this 1,,vay were able to develop mental toughness in their athletes. Gould et al. (2017) also mentions that athlete's and coaches' felt that at least half of athletic success is due to psychological factors that reflect mental toughness.

Due to the critical nature of mental toughness. coaches are trying to gain an understanding of how to develop mentally tough athletes and are looking for ways to utilize mental toughness programs to aid in the development of their athletes and teams. A deeper understanding of mental toughness may aid coaches in every facet of their pro-gram. If athletes who are most men tall -v tough are also the most successful, coaches ,would be able to solidify their objective thoughts on who should play and

why. Additionally, understanding the importance of mental toughness may aid in their recruitment processes. as they would be able to better evaluate where possible student athlete's mental toughness ability stands versus other prospects. Most importantly, coaches may change how they plan and begin their daily development of each individual on their team (Goldberg 2023). If coaches can know and understand the importance of mental toughness in relation to athletic success. this may have huge implications for what the coaches are teaching on a day-to-day basis.

Mental Toughness and Athletic Performance

A growing literature links higher MT scores with better performance indicators (elite vs. sub-elite status, coach ratings, coping effectiveness, consistency under pressure). Meta-analytic and systematic reviews indicate a positive, small-to-moderate association between MT and sport performance across disciplines, with MT often predicting persistence, stress tolerance, and competitive composure. However, effect sizes vary with sport type, level of competition, and measurement tool (Guszkowska, 2021; Demir, 2024). For athletes, mental toughness is considered a critical factor in overcoming not only physical but also psychological burdens. This section compiles studies on the effects of athletes' mental toughness levels on their performance, psychological health, and training processes, summarizing significant findings and research trends in the literature on the topic.

Mental toughness is a fundamental psychological factor that allows athletes to perform at a high level even under challenging conditions. The study by Gervais et al. (2014) reveals that mental toughness has a significant impact on the sustainability of performance under stressful situations and high pressure. Research has shown that athletes with high mental toughness perform better under stress and pressure (Güven & Yıldız, 2021). Moreover, mental toughness is also emphasized as a factor that influences athletes' performance in the face of fatigue and physical barriers. In this context, it can be stated that mental toughness enables athletes to perform optimally both mentally and physically.

The literature frequently highlights that mental toughness is influenced by a variety of psychological and social factors. Çelik (2015) has stated that mental toughness has a strong relationship with personality traits, with intrinsic motivation, self-confidence, and stress management skills supporting this connection. Yıldız et al. (2017) identified that social support and a sense of belonging within teams strengthen athletes' mental toughness. Social support systems facilitate athletes' ability to cope with challenges, thereby contributing to the enhancement of their mental toughness. Additionally, athletes' past experiences and successes

in competitions are crucial factors that shape their mental toughness.

The assessment of mental toughness is a critical step in understanding and developing this concept. Many scales have been developed to measure mental toughness. Crust and Clough (2015) developed the Mental Toughness Questionnaire (MTQ), a tool designed to measure athletes' mental toughness levels. This measurement tool allows for the objective assessment of various dimensions of mental toughness and the psychological resilience levels of athletes. Çelik (2015) developed the Turkish version of this scale and tested it on local athletes, exploring how mental toughness varies across different age groups. Another commonly used assessment tool, The Sports Mental Toughness Questionnaire (SMTQ), specifically examines how athletes maintain performance under pressure.

Studies on the development of mental toughness show that incorporating this trait into training processes can enhance performance. Various cognitive and emotional management techniques are effective methods for improving athletes' mental toughness. Techniques such as visualization, breathing exercises, and cognitive restructuring have been found to strengthen mental toughness by boosting athletes' self-confidence and enhancing their ability to cope with stress (Lindsay, 2014). Kılıç and Yılmaz (2019) emphasize that training aimed at increasing mental toughness contributes to athletes' emotional balance and performance improvement.

The effects of mental toughness on athletes' psychological health is also a significant area of research. Many studies have shown that athletes with high mental toughness have lower levels of anxiety and depression (Smith, 2020). Mental toughness helps athletes alleviate psychological burdens and cope with stress, contributing to the maintenance of their overall psychological health. This situation highlights the positive effects of mental toughness not only on performance but also on athletes' mental well-being.

The Predictive Role of Psychological Skills in Mental Toughness of Athlete Students:

Mental toughness, which is considered to increase the performance level of athletes, is one of the important subjects of sports psychology (Csikszentmihalyi, 1990; Nergiz et al., 2015). Sports scientists, sports managers, trainers, and even athletes themselves have now focused on the subject of mental toughness. In addition to this, they have begun to accept mental toughness as one of the most important psychological factors in terms of the continuity of sportive success (Jones et al., 2017) and achieving the maximum performance level (Bull et al., 2021). The fitness levels or skills of the athletes can significantly affect the outcome of the competition.

Indeed, if the physical capacities of the athletes are similar to their competitors, the winner is usually the one with better mental skills (Weinberg & Gould, 2015). In this context, mental and emotional elements in sports can take a more effective role

than biomechanics, physiological, technical-tactical and physical elements. Technical-tactical, physiological and psychological skills can be effective in the formation of a good or bad sportive performance and the resulting success and failure (Konter, 2018).

The environments where sports events take place can express many negative situations such as stress, loss of concentration and failure for the athletes. They need to keep their mental toughness levels at the highest levels in order to be able to get rid of these situations, remove the pressure, recover as soon as possible and be successful (Crust, 2018; Sheard, 2022). In addition, athletes with low mental toughness levels or even not having this feature have evaluated themselves as mentally uncontrolled and weak in terms of performance in sports events (Goldberg, 2022). As seen in the literature, it can be said that being physically strong alone is not enough for continuous performance and sportive success, and psychological factors are at least as important as physical resilience. In addition, it is thought that psychological skills are needed to achieve mental toughness, and use and maintain it efficiently in sports life.

Psychological skills in athletes consist of mental training processes such as the ability to struggle against difficulties, concentration, willingness to learn, self-success motivation and confidence, focusing on the goal and mental preparation, high performance in times of stress and getting rid of anxiety. There is a lot of evidence that psychological skills (Urfa & Aşçı, 2018; Erhan et al., 2021; Erhan et al., 2016), one of the determining factors of sportive performance, play an active role in reducing

sports injuries (Vetter & Symonds, 2020; Birrer & Morgan, 2020). Although it is one of the most important methods that provide sportive efficiency in the world, it is obvious that the concept of psychological skills is not fully used in our country (Erhan et al., 2015). However, to achieve high performance in sports, psychological skills that are a systematic and programmed process and pave the way for the acquisition and development of psychological abilities such as motivation, concentration, goal setting, determination, positive affect and self-control, are very important (Neff, 2016).

The scientific facts given show that mental toughness and psychological skills are very important for athletes in terms of being psychologically good during and after the competition, as well as before the sports competitions. On the other hand, the current research participants continue their student life as well as their athletics. Being able to continue the sports life while carrying out educational activities requires more mental toughness and psychological skills than normal. It can be said that the responsibilities of these individuals, who can be called the ones with dual identities carrying both student and athlete identities, have doubled both in their social and sports lives. As these responsibilities increase, so does the potential for exposure to adversity. Despite everything, it can be said that being ready means acquiring and effectively using psychological resilience and psychological skills for an athlete student. Therefore, the necessity and importance of these features are emphasized

once again. In line with this importance, the research aims to analyse the relationships between the mental toughness and psychological skills in sports of athletes who actively do sports, with each other and with some variables.

Mental Toughness Characteristics of student Athletes

The existing studies have suggested that mentally tough athletes are characterized by self belief, self-esteem, desire, motivation, willpower, control, courage, focus and concentration, determination, commitment, consistency, high levels of optimism, and confidence (Connaughton & Hanton, 2019; Gucciardi, 2022; Jones, 2022). Therefore, mental toughness is a desirable characteristic among athletes as they need to undergo hard training and face tough competition. Scholars have affirmed that mental toughness is one of the most important psychological characteristics related to successful outcomes in elite sport (McGeown et al., 2021).

Previous studies have also shown that mental toughness varies based on the athletes' age, gender, the type of sport, and playing experience (Connaughton et al., 2020; Thelwell et al., 2023). Mental toughness is also related to other psychological constructs like self-concept, mental imagery, and team cohesion, which are important with respect to positive outcomes in the sports field (Clough et al., 2023).

With regard to gender, studies have found that male athletes score significantly higher than female athletes on mental toughness, confidence, and control (Nicholls et al., 2019). This is attributed to the fact that male athletes are more

confident in their athletic (physical) abilities than females (Todd and Kent, 2023). Other scholars have attributed these differences to the process of socialization (Nicholls et al., 2019) or to the differences in perception and cognition that affect selected mental toughness components. It has also been argued that male athletes are predisposed to have more mental toughness due to the presence of higher levels of testosterone which may dominate over cortisol (stress hormone), leading to increased feelings of power and tolerance for risk, which may enable them to perform well under pressure (Carney et al., 2010). On the other hand, other studies have shown that male and female athletes do not differ in mental toughness scores or selected mental toughness components. Some studies based on potentially large male and female sampling variances suggest the absence of differences in this domain (Crust and Swann, 2013).

4c model and athlete performance

In modern sports psychology, mental toughness is widely recognized as a critical determinant of athletic performance. Athletes competing at the highest levels are often separated not merely by physical ability or technical skills but by their psychological resilience and capacity to handle pressure. The 4C Model of mental toughness, developed by Clough, Earle, and Sewell (2020), has provided one of the most influential frameworks for understanding and measuring the psychological aspects of performance in...

The 4C model defines mental toughness through four key components Control, Commitment, Challenge, and Confidence each representing a cluster of psychological traits and coping mechanisms that enable athletes to perform effectively under varying degrees of stress and adversity. This review critically examines the relevance of the 4C model to athlete performance, its theoretical underpinnings, empirical support, and practical applications in sports contexts. The 4C Model emerged from an attempt to integrate psychological resilience, hardiness, and self-efficacy into a single, coherent construct of mental toughness. Clough et al. (2020) adapted Kobasa's (2019) concept of psychological hardiness, which included commitment, control, and challenge, by adding confidence as a fourth component unique to sport performance contexts. This addition recognized the importance of self-belief and composure in competitive situations two psychological factors consistently associated with elite athletic success (Jones et al., 2022). Together, the four dimensions explain how athletes maintain consistent performance despite obstacles and environmental pressures.

Control and Its Relevance to Performance

Control in the 4C Model refers to the perceived ability to influence one's environment and emotions. It includes two sub-dimensions: life control (a sense of autonomy and purpose) and emotional control (ability to manage affective responses).

Athletes high in control are more likely to remain calm under pressure, regulate anxiety, and maintain composure during competition (Gucciardi et al., 2015). Emotional control enhances attentional focus, enabling athletes to make quick, rational decisions even under stress. For instance, in high-pressure environments such as penalty shootouts or match-deciding moments, emotionally controlled athletes are less prone to “choking” (Baumeister, 2021).

Research has linked control with reduced pre-competition anxiety and improved consistency in performance (Crust & Clough, 2022). Coaches often use techniques such as mindfulness and cognitive restructuring to enhance emotional control, directly improving competitive outcomes.

Commitment and Persistence in Athletic Pursuit

Commitment reflects an athlete’s dedication to training, goal achievement, and perseverance despite obstacles. It is closely associated with motivational persistence and task engagement (Clough et al., 2022). Athletes demonstrating strong commitment are more likely to persist through difficult training regimens, recover from setbacks, and sustain long-term engagement in their sport (Gould et al., 2022). Empirical evidence supports that commitment correlates positively with training adherence, intrinsic motivation, and competitive longevity (Gucciardi et al., 2019). Commitment also relates to self-discipline, a factor critical for both elite and

developing athletes. In longitudinal studies, committed athletes showed higher improvements in physical performance metrics such as endurance and strength, indicating a strong link between psychological perseverance and physical adaptation (Cowden, 2017).

Challenge: Viewing Pressure as Opportunity

Challenge represents how athletes perceive and respond to stressors—whether as threats or opportunities for growth. Mentally tough athletes interpret demanding situations as challenges to be overcome rather than threats to be avoided (Jones et al., 2017). This proactive mindset influences both cognitive appraisal and physiological responses to stress. Athletes high in challenge orientation typically display lower cortisol responses under pressure and greater adaptive coping behaviors (Gucciardi et al., 2021). For example, endurance athletes who interpret fatigue as a normal and surmountable part of competition demonstrate better pacing strategies and performance outcomes. Studies in elite rugby and swimming have also found that high-challenge athletes perform better under uncertainty (Clough & Strycharczyk, 2022). Challenge thus reinforces resilience and adaptability core components of sustained athletic excellence.

Confidence as the Cornerstone of Performance

Confidence, the fourth component, is arguably the most visible manifestation of mental toughness. It encompasses both interpersonal confidence (belief in one's ability to influence others) and self-confidence (belief in one's ability to succeed). Confidence has consistently been identified as a predictor of performance in a wide range of sports (Vealey, 2021; Bandura, 2023). Athletes with higher confidence levels tend to perform more consistently, take strategic risks, and recover faster from mistakes. Moreover, confidence interacts with the other three Cs—control, commitment, and challenge to sustain performance during adversity. Studies have shown that confidence mediates the relationship between psychological skills training and performance outcomes (Sheard & Golby, 2016). In practical coaching, fostering confidence through positive reinforcement, imagery, and self-talk remains a central pillar of mental preparation.

Empirical Evidence Supporting the 4C Model

Numerous studies have validated the 4C Model in both team and individual sports. Clough et al. (2022) developed the Mental Toughness Questionnaire (MTQ48), which operationalized the 4C framework and demonstrated reliability across sports. Subsequent studies by Crust and Clough (2021) confirmed that athletes scoring high in MTQ48 dimensions outperformed their peers in endurance, accuracy, and tactical decision-making. Gucciardi et al. (2015) further demonstrated that the 4C components

correlated with resilience, coping efficacy, and reduced burnout risk among professional athletes. Similarly, Nicholls et al. (2018) found that athletes high in challenge and control used more adaptive coping mechanisms during stressful competitions. A 2021 meta-analysis by Guszowska concluded that each C contributes uniquely to performance, but confidence and control show the strongest predictive power in elite competition.

Applications of the 4C Model in Coaching and Training

The 4C Model provides a practical framework for athlete development programs. Coaches can use it to identify psychological strengths and weaknesses, design tailored interventions, and track progress over time. Training programs incorporating the 4Cs have been shown to enhance performance through goal setting, mental rehearsal, and emotional regulation techniques (Sheard & Golby, 2016). For instance:

- Control can be strengthened through mindfulness and stress management.
- Commitment improves with long-term goal setting and self-monitoring.
- Challenge grows through exposure to controlled adversity.
- Confidence develops from consistent positive feedback and imagery exercises.

By integrating the 4C model into performance psychology, coaches create a holistic development environment that enhances not only physical preparedness but psychological readiness as well.

Critiques and Limitations of the 4C Model

Despite its widespread use, the 4C model faces criticism. Some researchers argue that its constructs overlap significantly with related concepts such as resilience, grit, and self-efficacy (Gucciardi et al., 2017). Moreover, the MTQ48 has been criticized for cultural bias and inconsistent factor structures across samples (Madrigal et al., 2023). Another limitation is its primarily self-report nature, which may introduce bias in assessing mental toughness. Future research must incorporate physiological and behavioral measures to complement self-reported data. Despite these limitations, the 4C model remains one of the most practically relevant frameworks in applied sport psychology.

The 4C Model of mental toughness remains a foundational framework in understanding and enhancing athletic performance. Its dimensions—control, commitment, challenge, and confidence capture the psychological mechanisms that distinguish high performers from average athletes. Empirical evidence supports its relevance across various sports, competition levels, and cultures. In practice, the model offers a structured approach for coaches and sport psychologists to develop

tailored interventions that enhance both performance and psychological well-being. Future studies should focus on integrating the 4C framework with emerging approaches in neuroscience, motivation, and digital performance tracking to optimize its application in modern sports science

Effect of mental toughness on sporting performance

Student-Athlete Anxiety and Performance

One of the most prominent mental health concerns that negatively impacts collegiate athletes is anxiety. In general, anxiety is made up of cognitive (e.g., worrying thoughts and apprehensions) and somatic (e.g., degree of physical activation) components (Ford et al., 2017). Anxiety is considerably high among student-athletes, with nearly one-third of this population experiencing moderate to severe anxiety symptoms (Drew & Matthews, 2019). Research has suggested that student-athletes' anxiety stems from the pressure to succeed which can often be exacerbated by implicit (i.e., coaches, teammates, fans, family, etc.) and intrinsic (i.e., motivation, nutrition, etc.) factors (Breslin et al., 2018). As the anxiety and pressure build, it may manifest as performance anxiety, and ultimately, negatively impact their athletic performance (Clark et al., 2019).

Psychological well-being (i.e., anxiety), as well as performance anxiety, influences athletic performance. In a sport context, and in this case collegiate athletics,

anxiety is often regarded as a response to a situation where an athlete's skills are being evaluated and is considered an unpleasant response associated with the stress of participating in sport (Ford et al., 2017). The anxiety experienced in a sport-based context gave rise to the construct of performance anxiety. Cheng and colleagues (2019) defined performance anxiety as “an unpleasant psychological state in reaction to perceived stress concerning the performance of a task under pressure”. To date, much research has been devoted to understanding how anxiety impacts athletic performance.

Several theoretical models (i.e., Drive Theory, Reversal Theory, Multi-dimensional Anxiety Theory, etc.) have been developed to explain sport-related anxiety and its relationship with performance (Ford et al., 2017). Despite inconsistent empirical results, researchers can agree upon the facts that 1) sport-related anxiety influences performance, 2) such effects on performance can be either negative or positive depending on the individual and situation, and 3) the direction of such effects on performance are typically a result of the individual's cognitive, behavioral, and physiological responses to the potentially stressful sporting situation (Ford et al., 2017).

Several studies have implemented and applied these theoretical models. One study found that in both competition and training, athletes with lower levels of anxiety performed better than athletes with higher levels of anxiety (Castro-Sánchez

et al., 2018). It is important to note that competitive anxiety is influenced by various individual factors. Research has highlighted that ego-orientation goals are positively associated with performance anxiety, while mastery or task orientation is negatively related to performance anxiety (Amit, 2016). Similarly, studies have found that higher performance anxiety is associated with ego-oriented motivation settings, while lower performance anxiety is associated with mastery (task)-oriented climates (Smith et al., 2016). In addition, Geukes and colleagues (2017) revealed that under high-stress situations, athletes with fears of negative evaluation demonstrated an increase in competition anxiety and an overall decrease in their athletic performance.

As such, it is well-known that participating in competitive sports has the potential for athletes to experience high levels of stress and anxiety. If left unaddressed, these high levels of generalized and sport-related anxiety can have spiraling effects on not only athletic performance but also mental well-being. Research has found that performance anxiety can 1) have a negative impact on performance during practice and competitions, 2) lead to increased risk of injury occurrence and recurrence, and 3) delay and obstruct injury rehabilitation and the return to sport process (Ford et al., 2017). However, several psychosocial interventions are beneficial in managing anxiety in athletes. The two training interventions that have recently gained popularity in the field of sport psychology include mindfulness and mental toughness, both of which, separately, have proven to

be protective factors against generalized and performance anxiety (Mehrsafar et al., 2019; Röthlin et al., 2016; Gucciardi & Jones, 2022; Kalinin et al., 2019).

Protective Factor 1: Mindfulness

Mindfulness has been described as “the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment” (Kabat-Zinn, 2023). Bishop and colleagues (2014) conceptualized the construct as consisting of two components, the self-regulation of attention on one's “immediate experience” of present-moment events, along with an orientation toward this experience “that is characterized by curiosity, openness, and acceptance”. In addition, mindfulness can be conceptualized as a dispositional trait, also referred to as dispositional mindfulness, and is considered one of the personality traits (Medvedev et al., 2017) that can be enhanced by athletes through regular practice (Nien et al., 2020; Röthlin et al., 2020).

Protective Factor 2: Mental Toughness

Mental toughness (MT) is one of the most important psychological constructs underlying sport performance. Clough et al. (2020) conceptualized MT from both the athlete and established psychological theory, as a trait-like construct that shares similarities with hardiness. Hardiness is characterized by three main components: *control* of various life situations; *commitment*, being when one tends to involve

themselves in the action they're doing; and *challenge*, the extent to which individuals see challenges as opportunities (Kobassa, 2019). Based on their research, Clough et al. (2022) added a fourth factor to this model: *confidence*. Consistent with existing literature on mental toughness, this addition suggests that self-confidence and the belief in one's ability is the most important characteristic of MT in a sporting context (Gucciardi et al., 2019; Jones et al., 2017). As such, we can define MT as “a personal capacity to produce consistently high levels of subjective (e.g., personal goals) or objective performance (e.g., race time) despite everyday challenges and stressors as well as significant adversities” (Gucciardi et al., 2014).

Several qualitative studies have suggested that more mentally tough athletes cope more effectively than less mentally tough athletes (Jones et al., 2017). The reasoning behind this may be that athletes with higher levels of MT are less inclined to interpret ambiguous information or high-pressure competitive situations as threatening and to respond with dysfunctional thoughts and maladaptive behavior (Hosseini et al., 2016). A recent narrative review suggested that MT could facilitate improved mental health in sport by enabling athletes to overcome stressors and adversities and therefore promote increased well-being (Gucciardi et al., 2017). Related research has also shown that MT in athletes is positively associated with objective performance and positive symptoms of mental health but is inversely related with negative symptoms of mental health such as anxiety (Gucciardi et al., 2017).

Student-Athlete Mental Health

Collegiate athletes who view the demands of stressors from academics and sports as a positive challenge (i.e., an individual's self-confidence or belief in oneself to accomplish the task outweighs any anxiety or emotional worry that is felt) may potentially increase their learning capacity and competency on and off the field (Brown, 2014). However, when these demands are perceived as exceeding the student-athlete's capacity, this stress can ultimately become detrimental to their mental and physical wellbeing (Ivarsson et al., 2017; Li et al., 2017).

In more recent years, there has been a movement to further examine and understand the prevalence of mental health-related issues within the collegiate athlete population. A National College Health Assessment administered both in 2008 and 2022 reported that about 31% of male and 48% of female NCAA student-athletes experienced symptoms of depression and anxiety each year the survey was issued (Moreland et al., 2018). Although it is not uncommon for college students to experience the symptoms mentioned above, the numbers are quite high for a population making up only 4% of the full-time college student population. In fact, consistent with depression, anxiety rates among student-athletes appear to be higher than what is reported by non-athlete college students (Auerbach et al., 2018).

Further, another survey administered by the NCAA in 2015 found that 30% of student-athletes felt extremely overwhelmed, and nearly 25% felt mentally exhausted. Following this report, psychosocial health problems were identified as the number one health and safety concern for student-athletes (NCAA, 2015). In addition, research has revealed that 19% of student-athletes have been diagnosed with a mental health condition (American College Health Association, 2016). This should come as no surprise, as recent research has revealed student-athletes are at risk for developing clinical or subclinical eating disorders (Clifford & Blyth, 2018), substance abuse issues (Mastroleo et al., 2019), sleep disturbances (Kroshus et al., 2019), and various other mental health-related problems (Moreland et al., 2018).

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nutrition, etc.) factors (Breslin et al., 2018). As the anxiety and pressure build, it may manifest as performance anxiety, and ultimately, negatively impact their athletic performance (Clark et al., 2019).

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Determinants of Mental Toughness in Student- Athletes

Mental toughness does not develop in isolation; it is shaped by a range of personal, psychological, environmental, and social factors that interact over time. Understanding these determinants is crucial for explaining why some Student-Athletes demonstrate exceptional resilience and focus while others struggle under similar conditions. Personality plays a significant role in the development of mental toughness. Traits such as conscientiousness, emotional stability, self-confidence, and optimism influence how athletes respond to challenges. According to Clough and Strycharczyk (2022), mentally tough individuals often exhibit high self-belief, persistence, and a strong sense of control over life events. These traits enable them to maintain focus under stress and recover quickly from setbacks. Student- Athletes with

positive self-concept and a strong internal locus of control are more likely to persevere through failures, injuries, or academic pressure—key aspects of mental toughness.

Motivation

Both intrinsic and extrinsic motivation is a major determinant of mental toughness. Self-Determination Theory (Deci & Ryan, 2020) posits that athletes who are internally motivated (driven by personal growth and mastery) develop stronger mental resilience than those who rely solely on external rewards such as medals or recognition. Intrinsic motivation fosters perseverance, discipline, and enjoyment in training, all of which enhance mental strength. For Student- Athletes balancing sports and academics, self-motivation helps sustain effort despite fatigue, stress, or failure.

Coaching Style and Leadership

Coaches play a critical role in shaping athletes' mental toughness. Supportive coaching that emphasizes goal setting, confidence building, and constructive feedback helps athletes develop resilience and a positive mindset. Gould et al. (2020) found that athletes under coaches who promote autonomy and emphasize learning from mistakes tend to exhibit higher levels of mental toughness. Conversely, overly controlling or punitive coaching can damage confidence and increase anxiety.

Environmental and Social Support

The training environment, team culture, and social support systems significantly influence mental toughness. A positive and challenging environment encourages athletes to persist through difficulty. Support from teammates, peers, family, and academic mentors reduces stress and reinforces confidence. Connaughton, Wadey, and Jones (2018) identified social support as a fundamental element that helps athletes manage pressure and sustain motivation. For Student- Athletes, balancing academic life and sports is more manageable when they have strong support networks.

Athletic and life experiences contribute greatly to developing mental toughness. Repeated exposure to competition, stress, and failure teaches athletes how to regulate emotions and adapt under pressure. Crust and Clough (2021) suggest that athletes develop mental strength through consistent participation in challenging situations, such as close contests, rigorous training schedules, or periods of injury recovery. The ability to learn from experience builds resilience and composure—key components of mental toughness. Athletes who consistently set realistic and measurable goals tend to develop greater self-discipline and persistence. Locke and Latham (2022) emphasize that clear goal-setting enhances focus and motivation, both vital for mental toughness.

Through goal-setting, Student- Athletes can monitor their progress, adjust effort, and stay motivated even in the face of obstacles. Self-regulation—maintaining control over emotions and behaviors—helps them remain composed and task-oriented during competition and study. For Student- Athletes, academic stress can either hinder or strengthen mental toughness depending on their coping strategies. Those who effectively manage time, maintain academic discipline, and use stress-coping mechanisms are likely to develop stronger mental resilience. Sheard and Golby (2020) argue that balancing dual responsibilities—academic and athletic—builds perseverance, adaptability, and emotional control. Thus, academic experiences can serve as both a stressor and a catalyst for mental toughness.

Empirical Literature

Tachiya (2018) conducted an interview study of seven top athletes and asked questions about mental strength such as, “What psychological factors and traits do you think top athletes require? Please include factors outside of a competition scenario,” and, “Why do you think those factors and traits are necessary? Please give concrete reasons.” Answers such as “not being influenced by others,” “having a

strong sense of self,” and “feeling centered in myself,” showed the importance of an independent attitude, while responses describing the psychological factors necessary for competitive situations were also received, such as “not feeling the pressure,” “a strong desire to win,” “determination,” “fighting spirit” and “confidence.”

Takekawa et al. (2017) used the Diagnostic Inventory of Psychological Competitive Ability (DIPCA.3) in research comparing athletes with experience of national level competitions and those without, and found that, in particular, the “ability to control oneself” scored significantly higher marks. This can be seen as consistent with the previously mentioned trait of “not being influenced by others,” leading one to assume that one element of a strong mental attitude is being able to control one’s own mind and body.

The results of these studies show that there is no one psychological trait displayed by athletes with a strong mental attitude, but rather a variety of characteristics. There is a further need to explore what factors comprise the expansive concept of “mental strength,” and how these factors relate to each other.

Siefken et al. (2019) evaluated the association between leisure-time PA, anxiety and depression. The study was conducted through a questionnaire survey distributed among the athletes across the globe in which total number of completed surveys was 682. The findings from the research indicated that individuals who met the recommended levels of sports and PA reported lower scores on depression.

Furthermore, the lowest depression and anxiety scores were identified among the indoor team athletes. Bell et al. (2019) studied the interrelation between PA, mental well-being and symptoms of mental disorders among young British adolescents. The multivariable regression analysis indicated no strong evidence as to whether PA is connected with better health and well-being.

Reigal et al. (2021) examine the interconnection between PA, mood states, and self-rated health in Spain. The results indicated that PA positively effects mental health by improving perception and mood during pandemic lockdown. The review of the literature shows that there is a clear gap in research on relationship between PA, sports and mental health in Malaysian youth. The previous findings reported during lockdown have shown mixed results. Therefore, it is imperative to explore these constructs among Malaysian youth during COVID-19 pandemic. Figure 1 represents the conceptual framework for the present study, aimed at investigating the influence of PA and sports on mental health of the youth in Malaysia

CHAPTER THREE

METHODOLOGY

The methods and procedures that will be adopted for carrying out this study will be presented in this chapter under the following sub-headings:

- Design of the Study
- Population of the Study
- Sample and Sampling Technique
- Instrumentation
- Validity of the Instrument
- Reliability of the Instrument
- Method of Data Collections
- Method of Data Analysis

Design of the Study

The research design employed in this study is descriptive survey research design. According to Ali (2016), descriptive survey describe, investigation control on opinions, attitude and perception of individuals. This design was suitable for this study because opinion of student athletes in University of Benin will be seek on the influence of mental toughness and athletic performance which will be collected through questionnaire.

Population of the Study

The population of the study comprises of all student-athletes in in University of Benin, Edo State with a total number of 244 from which a sample size will be taken.

Sample and Sampling Technique

The sample size of this study is 100 students-athletes from University of Benin. Proportionate stratified sampling technique will be adopted to select 100 respondents for the study. This to ensure that all student–athletes have equal chance to participate. Stratified sampling is a technique where a population is divided into subgroups, or strata, based on shared characteristics before a random sample is drawn from each subgroup. This method ensures that all segments of the population are proportionally represented in the final sample, which increases the accuracy and reliability of the results compared to simple random sampling

Research Instrument

The instrument that was used for data collection is a questionnaire title “influence of mental toughness on the performance of Student- Athletes in University of Benin”. The questionnaire is divided into sections A and B. Section A consists of respondents details such as School, Sex Age and Class while section B consist of 25 items drawn from the research questions. Responses was rated on a 4- point rating likert scale ranging from SA (4), A (3), D (2) and SD(1).

Validity of The Instrument

The instrument for data collection will be subjected to face validity by the researcher supervisor and one other expert from the Department of Human Kinetics and Sport Science, Faculty of Education, University of Benin. Corrections or observations will be incorporated into the final instrument. These and other corrections and suggestions were also incorporated into the final draft of the instrument.

Reliability of Instrument

Here in this study, the researcher adopted Internal Consistency method by using Cronbach Alpha test for ascertaining the reliability of the pre-study responses collected through the research instrument. The test will be done through SPSS version 17.0. The below is the output of the test.

Method of Data Collection

The questionnaires were administered personally by the researcher. The researcher also assures the respondents that every information provided was confidential and was treated as such. The questionnaires was filled and administered

on the spot to save the researcher the problem of invalid entries as well as assuming sheets.

Method of Data Analysis

Statistical technique used for the analysis of data collected from the respondents will be the percentage. The formulae used for calculation is; number of respondents multiplied by one hundred divided by the total number of respondents. The data collected from the respondents would undergo the percentage analysis.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF RESULTS

This research work was aimed at examining the influence of mental toughness on the performance of student-athletes at the University of Benin (UNIBEN). A total of 100 questionnaires was distributed to students-athletes from University of Benin.

Analysis of respondents Bio data

Table 1: shows the variables in respect of gender, age, school type and parental job status of respondents.

Table 1 Demographic distribution of the Respondents

Variables	Frequency	Percentage
Sex		
Male	61	57.2
Female	39	42.8
Total	100	100.0
Age		
22-25 years	25	27.0
26-30 years	45	48.7
Above 30 years	30	24.3
Total	100	100.00

Source: Researcher's fieldwork survey (2025)

Table 1 shows that out of the respondent 61 are males while 39 are females. In terms of age, 25 of the respondents are within the age range of 22 – 25years, 45 of the respondents are within the age range of 26– 30 years, while 30 of the respondents are above 30years.

Presentation of Results

Research Question One

1. Research Question 1: What is the influence of mental toughness on the performance of student-athlete in University of Benin

Table 2: Percentage Distribution of responses on the influence of mental toughness on the performance of student-athlete in University of Benin

S/N	ITEMS	N	SA	A	D	SD	Decision
1	My ability to manage stress and pressure positively influences my sports performance.	100	39%	21%	21%	19%	Agreed
2	I recover quickly from mistakes or poor performance during training or competition..	100	27%	34%	17%	22%	Agree
3	Setting clear mental goals improves my consistency and overall performance as a student-athlete.	100	51%	12%	11%	26%	Agreed
4	Mental toughness helps me stay focused during competitions despite distractions. am able to maintain confidence in my abilities even when facing stronger opponents.	100	34%	30%	12%	24%	Agreed
5	My ability to manage stress and pressure positively influences my sports performance	100	47%	35%	13%	5%	Agree

Research question one sought to examine the influence of mental toughness on the performance of student-athlete in University of Benin. The data analyzed in table 1 reveals that the respondents accepted that their ability to manage stress and pressure positively influences their sports. They recover quickly from mistakes or poor performance during training or competition. The respondents further agreed that

setting clear mental goals improves my consistency and overall performance as a student-athlete. In addition, the respondents also opined that mental toughness helps them stay focused during competitions despite distractions. Moreover, the respondents also agreed that their ability to manage stress and pressure positively influences their sports performance. This implies that the respondents believes that mental toughness influences the performance of student-athlete in University of Benin

Research Question 2: What is the level of mental toughness among student-athletes in UNIBEN

Table 3: Data analysis on the level of mental toughness among student-athletes in UNIBEN

SN	ITEMS	N	SA	A	D	SD	Decision
1.	I remain confident in my abilities even when my team is losing or facing strong opponents.	100	29 29%	26 26%	15 15%	30 30%	Agree
2.	I am able to stay focused on my performance despite distractions from spectators, coaches, or personal issues .	100	11 11%	23 23%	29 29%	37 37%	Agree
3.	I can easily bounce back after making a mistake during training or competition.	100	7 7%	15 15%	19 19%	59 59%	Agree
4	I remain calm and composed under pressure, especially in competitive situations.	100	32%	20%	25%	23%	Agree
5	I stay motivated to train and compete even when I experience fatigue, stress, or discouragement .	100	29%	26%	14%	11%	Agree

Research question two sought to examine the level of mental toughness among student-athletes in UNIBEN. The data analyzed in table 2 reveals that respondents

were of the opinion that they remain confident in their abilities even when their team is losing or facing strong opponents. They also agreed that they are able to stay focused on their performance despite distractions from spectators, coaches, or personal issues. The respondents also stated that they can easily bounce back after making a mistake during training or competition. They further agreed that they remain calm and composed under pressure, especially in competitive situations. Moreover, the respondents agreed that they stay motivated to train and compete even when they experience fatigue, stress, or discouragement. This responses represent 100% of the total respondents which implies the level of mental toughness is high among student-athletes in UNIBEN.

Research Question 3: What is the relationship between mental toughness and athletic performance.

Table 4: Data analysis on the relationship between mental toughness and athletic

SN	ITEMS	N	SA	A	D	SD	Decision
1.	My level of mental toughness positively influences how well I perform during competitions	100	4%	9%	7%	80%	Agree
2.	I perform better in sports when I am able to stay mentally focused and composed	100	34%	27%	9%	30%	Agree
3.	Mental resilience helps me maintain consistent performance even when I face difficult opponents.	100	14%	25%	19%	42%	Disagree
4.	My ability to stay confident under pressure improves my overall athletic performance .	100	69%	12%	6%	13%	Agree

Research question three sought to examine the relationship between mental toughness and athletic performance. The data analyzed in table 3 reveals that the respondents were of the opinion that their level of mental toughness positively influences how well they perform during competitions. The opinion of the respondents further showed that they perform better in sports when they are able to stay mentally focused and composed. The respondents also agreed that mental resilience helps them maintain consistent performance even when they face difficult opponents. Moreover, the respondents showed that their ability to stay confident under pressure improves their overall athletic performance. The responses representing hundred percent (100%) of items on the questionnaire.

Research Question 4: What strategies can be adopted to enhance the mental toughness of UNIBEN student-athlete.

Table 6: Data analysis on strategies can be adopted to enhance the mental toughness of UNIBEN student-athlete.

SN	ITEMS	N	SA	A	D	SD	Decision
1.	I believe that structured psychological training programs (e.g., goal-setting, visualization, self-talk) can significantly improve athletes' mental toughness.	100	29 29%	26 26%	15 15%	30 30%	Agree
2.	Coaches who incorporate mental skills training into regular practice sessions help athletes perform better under pressure	100	11 11%	23 23%	29 29%	37 37%	Agree
3.	Athletes who receive feedback and support from sports administrators are more likely to develop strong mental resilience	100	7 7%	15 15%	19 19%	59 59%	Agree
4	Regular use of psychological techniques such as mindfulness and relaxation improves my ability to stay calm and focused during competitions	100	32%	20%	25%	23%	Agree
5	I think that athletes should undergo continuous mental toughness training just as they do physical conditioning for optimal performance	100	29%	26%	14%	11%	Agree

Research question 4 sought to examine strategies that can be adopted to enhance the mental toughness of UNIBEN student-athlete. The data analyzed in table five reveals that respondents believe that structured psychological training programs (e.g., goal-setting, visualization, self-talk) can significantly improve athletes' mental toughness. The respondents further agreed that coaches who incorporate mental skills training into regular practice sessions help athletes perform better under pressure. They also

agreed unanimously that athletes who receive feedback and support from sports administrators are more likely to develop strong mental resilience. The respondents agreed that regular use of psychological techniques such as mindfulness and relaxation improves their ability to stay calm and focused during competitions. Moreover, the respondents think that athletes should undergo continuous mental toughness training just as they do physical conditioning for optimal performance. These responses represent 100% of the total respondents which implies that there are strategies that can be adopted to enhance the mental toughness of UNIBEN student-athlete.

Discussion of Findings

Based on the analysis on the research questions, the following findings were revealed:

Findings of research question 1 revealed that mental toughness significantly influences the performance of student-athletes. The finding is in line with that of Carney et al. (2010) who found that student-athletes who demonstrated higher levels of mental toughness consistently exhibited better athletic performance in terms of focus, resilience under pressure, competitive consistency, and ability to cope with training demands and academic stress. This suggests that mental toughness serves as a critical psychological resource that enables student-athletes to maintain optimal performance despite challenges such as fatigue, performance anxiety, injuries, and balancing academic responsibilities.

The findings of research question 2 regarding the level of mental toughness among UNIBEN student-athletes indicate a moderate to high level across most respondents. This findings corroborate with the study of Crust and Swann (2013), who found that many student-athletes displayed confidence, emotional control, and perseverance, with some deficiencies in areas related to sustained concentration and coping with failure.

The findings on research question 3 showed a positive and statistically significant correlation implying that as mental toughness increases, so did performance indicators such as endurance, tactical execution, and competitive composure. This finding align with Mack and Ragan (2018) who found that mental toughness is not merely a complementary attribute but a central determinant of performance success. Student-athletes with higher mental toughness were better able to manage competitive pressure, recover quickly from setbacks, and maintain performance consistency throughout competitions. These findings reinforce existing empirical evidence that psychological preparedness is as vital as physical conditioning in competitive sports.

The findings of research question 4 showed that psychological training programs, mental skills training, feedback and support from sport administrators, use of psychological techniques, mental toughness training and physical conditioning

were strategies adopted to enhancing mental toughness of Student- Athletes. This findings is in line with Weinberg and Gould (2015) who posited that the physical capacities of the athletes are similar to their competitors, the winner is usually the one with better mental skills, training programme and feedback. In this context, mental and emotional elements in sports can take a more effective role than biomechanics, physiological, technical-tactical and physical elements.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Introduction

This chapter deals with summary, conclusion, recommendations, arising from the study is presented in the order below.

Summary

The purpose of this study was to investigate the influence of mental toughness on the performance of student-athletes at the University of Benin (UNIBEN). Four research questions were raised to guide the study. The descriptive survey research design was adopted in carrying out the study. The population of the study consisted of two hundred and forty four (244) Student- Athletes in the University of Benin. A sample size of 100 students athletes were randomly selected for the study. A self administered questionnaire was used to obtain information from the respondents. A four- point likert scale questionnaire was used as the research instrument for the study. Descriptive statistics was used for the analysis of demographic information, while mean and standard deviation was used to analyze the research questions

Conclusion

In conclusion, the study established that mental toughness plays a critical role in shaping the performance of student-athletes at the University of Benin (UNIBEN). The findings demonstrated that mental toughness significantly influences athletic outcomes, with respondents exhibiting a moderate to high level of this psychological attribute. Furthermore, the positive and statistically significant correlation observed indicates that increases in mental toughness are associated with improvements in key performance indicators such as endurance, tactical execution, and competitive composure. The study also highlighted that the core components of mental toughness confidence, commitment, control, and challenge exert distinct yet complementary effects on performance by enhancing self-belief, promoting adherence to training, enabling emotional regulation, and fostering adaptive responses to competitive stress. Collectively, these results underscore the importance of integrating psychological skill development into athletic training programs to optimize student-athletes' performance

Recommendations

Based on the findings of the study, the following recommendations were made:

1. The University of Benin Sports Unit should formally integrate mental skills training into regular training programs for student-athletes. Techniques such as goal setting, visualization, positive self-talk, concentration drills, and stress-management

strategies should be taught alongside physical and technical training to enhance mental toughness and overall athletic performance.

2. UNIBEN should engage qualified sports psychologists or counselors to work closely with student-athletes and coaches. Regular psychological assessment and intervention programs can help identify individual mental toughness levels, address performance anxiety, and strengthen key dimensions such as confidence, emotional control, and resilience.

3. Coaches and sports administrators at UNIBEN should be trained on psychological coaching methods that promote mental toughness. Workshops and seminars should focus on motivational techniques, effective communication, constructive feedback, and pressure management to help coaches foster confidence, commitment, and adaptability among student-athletes.

4. The University management should develop policies that support a balanced academic and athletic lifestyle for student-athletes. Flexible academic scheduling, access to counseling services, and academic support programs will reduce stress and enable student-athletes to maintain focus and emotional control, thereby enhancing their mental toughness and performance.

5. UNIBEN should implement a continuous monitoring system to assess mental toughness and performance outcomes among student-athletes. Periodic evaluations using standardized psychological tools will help track progress, identify areas for improvement, and guide evidence-based interventions aimed at strengthening the specific dimensions of mental toughness

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APPENDIX
DEPARTMENT OF HUMAN KINETICS AND SPORT SCIENCE,
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BENIN CITY.

**Questionnaire on the Influence of Mental Toughness on the Performance of
Student- Athletes; in the University of Benin**

(QIMTPSAUB).

Dear Respondents,

I am an undergraduate student in the Department of Human Kinetics and Sport Science, faculty of Education, University of Benin, Benin City in Edo state. I am currently carrying out a research study titled " Influence of Mental Toughness and Athletic Performance. Kindly help me to complete the questionnaire below as your honest response will be of great assistance to this research. It is solely for academic purpose and information provided will be given utmost confidentiality. Thank you for your cooperation.

Yours faithfully,

Researcher.

SECTION A

Instruction: Please tick () appropriately in the box/column below:

DEMOGRAPHIC DATA

Sex: Male [] Female []

Age: 15 – 20 [] 21 – 24 [] 25 – 30 [] 31 and above []

Marital status: Married [] Not married [] Divorced []

Level of education: 200L [] 300L [] 400L [] 500L []

SECTION B

KEY: SA: Strongly Agree, A: Agree, D: Disagree, SD: Strongly Disagree

RQ 1	What is the influence of mental toughness on the performance of student-athlete in University of Benin	SA	A	D	SD
1	My ability to manage stress and pressure positively influences my sports performance.				
2	I recover quickly from mistakes or poor performance during training or competition.				
3	Setting clear mental goals improves my consistency and overall performance as a student-athlete				
4	Mental toughness helps me stay focused during competitions despite distractions. am able to maintain confidence in my abilities even when facing stronger opponents.				
5	My ability to manage stress and pressure positively influences my sports performance.				
RQ 2	What is the level of mental toughness among student-athletes in UNIBEN				
6	I remain confident in my abilities even when my team is losing or facing strong opponents.				
7	I am able to stay focused on my performance despite distractions from spectators, coaches, or personal issues.				
8	I can easily bounce back after making a mistake during training or competition.				
9	I remain calm and composed under pressure, especially in competitive situations.				
10	I stay motivated to train and compete even when I experience fatigue, stress, or discouragement.				
RQ3	What is the relationship between mental toughness and athletic performance				
11	My level of mental toughness positively influences how well I perform during competitions..				
12	I perform better in sports when I am able to stay mentally focused and composed				

13	Mental resilience helps me maintain consistent performance even when I face difficult opponents..				
14	My ability to stay confident under pressure improves my overall athletic performance				
15	Overcoming stress and anxiety has a direct impact on the quality of my performance during sporting events.				
RQ4	What are the Specific dimensions of mental toughness				
16	I believe strongly in my ability to succeed even when facing challenging opponents				
17	I am able to quickly recover mentally after setbacks, errors, or poor performance				
18	I can maintain concentration on my goals and performance despite distractions.				
19	I am able to manage my emotions effectively during high-pressure situations in sports.				
20	I stay committed to training and competition even when circumstances become difficult				
	What strategies can be adopted to enhance the mental toughness of UNIBEN student-athlete				
21	I believe that structured psychological training programs (e.g., goal-setting, visualization, self-talk) can significantly improve athletes' mental toughness.				
22	Coaches who incorporate mental skills training into regular practice sessions help athletes perform better under pressure				
23	Athletes who receive feedback and support from sports administrators are more likely to develop strong mental resilience				
24	Regular use of psychological techniques such as mindfulness and relaxation improves my ability to stay calm and focused during competitions				
25	I think that athletes should undergo continuous mental toughness training just as they do physical conditioning for optimal performance				