IMPACT OF MOTIVATIONAL TRAINING ON SELF-EFFICACY, SELF-REGULATION AND PERFORMANCE OF MIZO PROFESSIONAL SPORTSMEN

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CERTIFICATE

This is to certify that the present research work titled, "Impact of Motivational training on Self-efficacy, Self-regulation and Performance of Mizo Professional Sportsmen" is the original research work carried out by Ms. Rebecca Vanlalruati under my supervision. The work done is being submitted for the award of the degree of Doctor of Philosophy in Psychology of Mizoram University.

This is to further certify that the research conducted by Rebecca Vanlalruati has not been submitted in support of an application to this or any other University or an Institute of Learning.

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DECLARATION

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I **REBECCA VANLALRUATI,** hereby declare that the subject matter of this thesis is the record of work done by me, that the contents of this thesis did not form basis of the award of any previous degree to me or to do the best of my knowledge to anybody else, and that the thesis has not been submitted by me for any research degree in any other University/Institute.

This is being submitted to the Mizoram University for the Degree of **Doctor of Philosophy in Psychology.**

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Chapter – I

INTRODUCTION

Sports play an integral role in society for a number of individuals, at a professional level, an indispensable part of human activity, and even as either enthusiastic or casual observers. As physical activities contribute to health and well-being (Lamonte et al, 2008) engaging in sport activities would be beneficial for the well-being of individuals (Downward & Rasciute, 2011; Le Menestrel & Perkins, 2007; Snyder & Spreitzer, 1974). As the world is fascinated with sports, the wavelength is similar in India as well. India has a rich history of different types of sports and sports has played an essential role in the lives of the people in the form of health benefits, entertainment as well as spreading social unity (Tiwari et al, 2020). With the existence of diversity in India the types of sports that are popular are also different and vary widely from athletics, basketball, boxing, cricket, hockey, kabaddi, football, table tennis, tennis, wrestling and so on. (Koji, 2023; Saoji, 2017; Sharma, 2023) and the type of sports popular in each Indian state would differ as well (Iyer. 2020). Moreover, there are a number of "governing bodies for sports, institutes and academies" (Ramachandran, 2008, p. 168) in India.

Mizoram, located at the North Eastern part of India, is one of the 28 states in India (Lalkima, 1997; Lodrick, 2019; Ministry of Communication & Information Technology, n.d.). The terrain of Mizoram is hilly and enjoys pleasant weather with adequate rainfall throughout the year (Lodrick, 2023). The people of Mizoram are known as the Mizo, meaning "highlander or hillmen" (Nunthara, 1996, p.33). The two main official languages in Mizoram are English and Mizo, with various dialects spoken alongside (Ministry of Development of North Eastern Region, n.d). The majority of Mizoram's population is categorized as Scheduled Tribes by the Government of India (The Mizoram Gazette, 2014). Similar to other states in India, sports have been a vital component in Mizo society since time immemorial (Thadou 2020). It is deeply loved in Mizoram and is an important source of employment as well (Express Web Desk, 2020). The number of professional Mizo sports persons have increased over the times, along with those engaging in leisure sports activities across all age groups. There are a number of popular sports such as badminton, basketball, football and so on. Inkawibah, insuknawr Sakuh Uilut, Zawnga Leilawn

Dim Dim, Pang aw Inzial, inbuan, Sakeibuk Ka Luah, and others, are popular indigenous games in the region. The state authorities are dedicated to developing the talents of the Mizo youth in the area of sports (Lalbiakzarzovi, 2017). In the context of Mizoram, where sports hold significant cultural and societal importance, there is a compelling need for a thorough investigation into the psychological aspects of sports performance. Mizoram's unique cultural identity and passion for sports, ranging from traditional games to globally popular ones like football and badminton, provide a distinct landscape to explore the influence of psychological skills training. Given the growing number of Mizo individuals engaging in sports, both professionally and recreationally, understanding the psychological factors influencing their performance becomes crucial. Moreover, considering the commitment of state authorities to nurture sports talents among the Mizo youth, a study focusing on psychological skills training gains particular relevance. Investigating the effectiveness of such interventions in Mizoram not only addresses a local gap but also contributes valuable insights to the broader understanding of sports psychology in diverse cultural contexts. The study's findings have the potential to guide tailored psychological training programs that align with the cultural nuances and sporting preferences of Mizoram, thereby enhancing the overall well-being and performance of athletes in the region.

Sports and psychology

Sports is a concept with multiple facets and can be regarded as a physical activity that can be done as an individual or group (citation). Sports involve physical exertion along with performance and requires skill (Clearinghouse for sports, n.d). In addition, there are a number of sports played at a competitive level (Maguire et al, 2023), which could be different based on the culture and norms popular at the time (Clearinghouse for sports, n.d). Health benefits of physical activity and engaging in sports yield benefits for physical and psychological health (Malm, 2023). Hence, psychological principles would be applicable in helping to promote one’s development and progress when it comes to individuals who are active in

professional sports or recreational sports (American Psychological Association [APA], n.d).

Sport offers an expansive area for psychological inquiry as it comprises emotion, competitiveness, teamwork, achievements, and play. People who participate in sports, specifically competitive sports, subject themselves to a great deal of strain, both physical and mental, in order to learn abilities requiring a degree of devotion and expertise. The practice of sports, involving competitive element, performance, and the establishment of guidelines and standards, fulfils a basic human desire for personal development and represents a fundamental social right. Therefore, individuals whose performance is expected and to whom the rules are applied may be classified as sports persons (Nisar, 2015). In addition, professional sportsmen can be regarded as athletes who earn their livelihoods by participating in sports competitions at the highest levels of competition (Soccer Training, n.d.). These individuals possess a high level of skill and are recognized for their exceptional physical and mental abilities. They often compete in sports leagues and tournaments, representing their teams or countries and receiving financial compensation for their efforts. Professional sportsmen face unique challenges that distinguish them from amateur athletes. These challenges include the pressure to perform at high levels consistently, the risk of injury, the pressure to maintain physical fitness, and the need to manage their time and finances effectively (García-Santos et al., 2021). The demands of being a professional sportsman can affect their mental health and well-being, leading to conditions such as anxiety, depression, and burnout (Gouttebarge et al., 2021). Therefore, it is essential for professional sportsmen to have access to support services and resources to help them manage the stress and demands of their profession. Moreover, associating oneself with professional teams fosters well-being among viewers as well (Nangia, 1988) indicating the potential impact of sports for health.

Experts in sport psychology are interested in how involvement in sport, exercise, and physical activity may boost personal growth and well-being throughout one's life (LeUnes and Nation, 2002). Sport psychology is a field of psychology in which psychological and other relevant mental factors that could influence

individuals in their participation as well as performance in exercise, physical activity or sport are studied, and also involves the application of knowledge gained through the study into daily life of individuals engaging in the activity (World Health Organization [WHO], 2010). Sports also involve

A number of studies have been conducted in the area of sports and exercise by sport psychologists in addition to others in academia (Williams, 2001). Psychological preparation remains one of the most important aspects for improving performance. According to Alderman (1974), psychological factors play a crucial role in sports performance. He emphasizes that regardless of an individual's ability, skill, or fitness level for a particular task or sport, their performance quality or ultimate success is likely to depend on their distinct psychological makeup. Since sport is an area that requires both physical and mental effort and activity, it may frequently involve encountering immense psychological challenges, especially when athletes are entering the competitive realm of sports. Even though athletes are aware of the significant nature of mental ability when it comes to competitive sports, only a few have reportedly invested in the necessary work to train themselves mentally when it comes to sports (Bull, Albinson & Shambrook, 1996; Weinberg & Williams, 2010). As sport competitions put the mind and body to test, hence individual characteristics related to one's physical and psychological state might provide some benefits and advantages that leads to success. Athletes might not have the knowledge resources nor understand how much time they need to allocate time to prepare themselves mentally for a game.

Psychological training in sports

Studies have indicated that psychological skills are not practiced as frequently considering their importance (Waldenmayer & Ziemainz, 2007) even when athletes themselves believed that mental and psychological factors contribute to at least 50% for a good game (Loehr, 1995). Most athletes devote merely 5% to 10% of their total training time to improving their mental skills (Loehr, 1995). Psychological training involves following a systematic method that focuses on

certain psychological factors to enhance performance during sports or other physical activity (APA, n.d; Birrer & Morgan, 2010; Weinberg & Gould, 2007).

In the present study, the term "Motivational Training" was used instead of "Psychological Skills Training (PST)" to provide clarity and emphasis on the central theme of the study, which was to investigate how training designed to enhance motivation could influence self-efficacy, self-regulation, and performance, particularly in the context of achievement motivation (HAM and LAM). Psychological Skills Training is a widely recognized approach for enhancing athletic performance among sportsmen. This training approach seeks to enhance athletes' inherent motivation by equipping them with various cognitive and behavioral competencies to sustain attention, optimism, and stay driven throughout both training sessions and tournaments. Several researches emphasized the benefits of Psychological Skills Training (PST) in improving in enhancing athletes' performance. For instance, Fournier et al. (2005) implemented a 10-month PST program, resulting in significant improvements in gymnastic performance and psychological skill development among female gymnasts compared to non-participants. Another study by Madera et al. (2021) demonstrated that PST can improve anxiety and anaerobic performance in college students, with males exhibiting higher stress levels during training and performance compared to females. Additionally, a study by Edwards (2008) underscored the positive impact of sport psychological skills training programs on youth athletes. These interventions were shown to enhance psychological skills, psychological well-being, and overall sporting performance among young athletes. Overall, the evidence suggests that psychological skills training/ motivational training is a promising strategy for improving sportsmen's performance, and further research is needed to identify the specific components of the training that lead to performance improvements.

Psychological skills training in sports can take various forms, including visualization, goal-setting, reinforcements, self-talk etc. Amongst the most common techniques used in psychological skills training is setting goals. It involves the process of setting specific, measurable, achievable, relevant, and time-bound

(SMART) goals that an athlete wants to achieve (Doran, 1981). Studies have shown that goal setting can improve an athlete's motivation, self-confidence, and performance (Jian, 2009; Ward, 2011). Another technique used in psychological skills training is self-talk. It involves the use of positive statement or phrase to improve an athlete's concentration, motivation, and self-belief. Research has shown that positive self-talk can enhance an athlete's performance and reduce anxiety (Hatzigeorgiadis et al., 2009; Galanis et al., 2022). Imagery is another technique used in psychological skills training. It involves creating mental images of successful performances and visualizing oneself achieving their goals. Research has shown that imagery can improve an athlete's confidence, concentration, and performance (Lajcik, 2008; Predoiu et al., 2022).

The findings from diverse studies investigating the impact of psychological skills intervention programs on variables like self-efficacy and self-efficacy has indicated positive results. Feltz and Riessinger (1990) reported an increase in self-efficacy for participants exposed to in vivo emotive imagery and performance feedback. Similarly, Sheard & Golby (2006) also reported an increase in several psychological attributes including self-efficacy among adolescent high-performing swimmers involved in a seven-week psychological skills training program. McCroy (2013) in his study also found that multi-modal Psychological Skills Training improved self-regulation, self-efficacy, and psychological skills in military pilot-trainees with learning challenge. Self-efficacy and self-regulation are essential for efficient performance, hence from reliable research findings, it can be understood that motivational training programs would be a great asset in helping athletes attain peak performance.

Motivation and Sports

Psychological and physiological variables play an essential part in determining performance levels in games and sports (Schilling & Hyashi, 2001). Several studies have shown that psychological variables influence athletic performance (Baker & Horton, 2004; Gimeno et al., 2007; Iglesias-Martínez, 2021 Motivation has been considered a cornerstone in sports, playing a pivotal role in

driving athletes towards success, as highlighted in various studies and research (Vallerand, 2012; Đurović et al., 2020). Much research has been done on achievement motivation and its impact on performance The importance of achievement motivation in sports has also been the subject of numerous studies, and its significance has been widely recognized (Zuber & Conzelmann, 2014; Grygiel, 2021).

Motivation is important in sports psychology because it helps researchers understand and explain human behavior in the area of physical exercise by looking at participation and withdrawal motives, intrinsic and extrinsic orientation, and achievement goals (Singh, 2015). However, sporting achievement, which may be explained by an athlete's performance, is a product that might vary depending on individual motivation levels (Kaynak et al., 2014). One of the key factors which enhance the motivation level is the achievement motive among athletes (Can at all, 2010; Soyer at all, 2010). The entirety of a player's physical, mental, and psychological preparations is the maximum level of performance they strive for. As the ability to maintain long-term high-intensity training sessions during the physical preparation stage is determined by motivation. Achievement motivation can explain why people engage in physical activities and why they persist in tasks that demand patience and perseverance over time.

Motivation is acknowledged as a vital component in sports performance in sport psychology (Gould, Dieffenbach, & Moffett, 2002), but it is also revealed to be related to athletes' tenacity throughout workouts and contests (Wilson & Rodgers, 2004, according to Vallerand, 2007). Motivation is one of the most essential psychological variables for success in sports, according to both players and trainers (Gould, 1982).

Extrinsic, intrinsic, physiological, and achievement motivation are some of the several types of motivation (Atkinson n, 1964; Harackiewicz, Barron, Carter, Lehto, & Elliot, 1997). The desire to achieve is referred to as achievement motivation (nAch). According to Weinberg and Gould (2018), individuals are more motivated to succeed when they are faced with a challenge and aware that the

outcome will determine their success or failure. Although there are numerous different perspectives on motivation, most people fall under the basic categories that correspond to the various approach in personality including trait-centered orientation, situation-centered orientation and interactional orientation (Heckhausen, 1991). The trait-centered view (also known as the participant-centered view) claims that motivation is generally influenced by personality attributes, suggesting that a student's, athlete's, or exerciser's personality, needs, and objectives are the major driving forces of motivated behavior (Weinberg and Gould, 2007). The situation-centered approach, contrary to trait-centered view, claims that motivation is largely determined by circumstances (Weinberg and Gould, 2007). For example, a person may be enthusiastic in their pilate class but uninterested to be part of a professional sports setting. The participant-by-situation interactional perspective of motivation is the one most commonly supported by sport and exercise psychologists today. It follows the work of Lewin (1951) who stated that behavior is a person's and a situation's function. Participants (e.g., personalities, values, passion, etc.) and contextual elements, such as the coach's approach or team dynamics, both contribute to motivation, according to interactionists.

Goal setting, self-talk, mental imagery and mental rehearsal, and relaxation are the four PST methods that Vealy (1988) identified as being the four most prominent PST methods in sports psychology books (as cited in Hardy, et al., 1997). Each method enables the athlete to work on developing more than one psychological skill, so that they are also working on improving and maintaining their strengths, such as commitment, concentration/attention, and motivation, as they build up their weak areas (Hardy, et. al., 1999; Weinberg & Gould, 1999).

Theories of motivation

Through the years, four ideas have emerged to understand what motivates individuals to act: need achievement theory, attribution theory, achievement goal theory, and competence motivation theory are some of the theories that have been proposed.

Need Achievement Theory. According to Need achievement theory (Atkinson, 1974; McClelland, 1961) motivation is an interactional approach that takes both situational and personal factors into account when predicting behavior. The need for achievement theory's performance predictions serves as the foundation for all modern theories of achievement motivation. While recent theories offer alternate reasons for the cognitive mechanisms behind discrepancies in accomplishment, the predicted behaviors of those excelling and those with lower performance persist essentially consistent. People are motivated by two key factors in their personality traits: wanting success for pride and avoiding failure to prevent shame (Gill, 2000, p. 104). According to the concept, balancing of such factors are what influences actions. High achievers, driven by succeeding, handle failure well and take pleasure in evaluating their skills, while low achievers, focused on avoiding failing, display reluctance towards succeeding and heightened worries about failing. For people with moderate amounts of each motive, the theory provides no solid predictions (Gill, 2000). It is important to not only observe behavior but evaluate the situation as well in order to achieve success. An observation regarding the prospect of getting successful in a situation, including its incentive worth, is essential. The resultant tendency or behavioral tendency, which is produced by evaluating an individual's achievement motive levels in connection to situational factors (e.g., probability of success or incentive value of success), is the third component of the need accomplishment theory. The theory works best in situations where there is a 50-50 probability of success. That is, in this circumstance, high achievers seek out challenges because they love competing against people of similar skill or accomplishing activities that are neither too simple nor too tough. Low achievers, on the other hand, shun such difficulties, preferring either simple activity with a high probability of success or excessively difficult ones with a high probability of failure. Because no one expects them to succeed, low-achieving people sometimes enjoy extremely tough assignments. A person’s emotional responses, especially pertaining to self-esteem along with guilt is another element of need for achievement theory. Regardless of their achieving levels, individuals have a desire for pride as well as avoidance of humiliation, however, the interplay between their personality traits and circumstances occurs in diverse ways, causing inclination towards one over another.

Higher achieving individuals prioritize pridefulness, while lower achieving individuals are concerned with worry and shame. Achievement behaviors, the last factor of need accomplishment theory, show the working together of previous factors in influencing behaviors. Higher-performing individuals choose difficult jobs with moderate risks while also excelling in assessment settings. Lower-achieving individuals evade risking intermediary dangers, struggle in assessment and critical circumstances, while choosing projects that are either too tough to fail or too easy to succeed for avoidance of complex responsibilities.

Attribution Theory. The study of how people interpret their achievements and failures is known as attribution theory. This viewpoint, developed by Heider (1958) and popularized by Weiner (1985, 1986), maintains that there are barely a few categories in which thousands of alternative causes for success and failure may be categorized. In essence, the lasting outcomes of achievement or lack thereof, whether elements arise externally or internally (locus of causality), and whether they are subject to influence by individuals or beyond their reach constitute the fundamental attribution categories.

Orbach et al. (1999) on applying attributional therapy studied the effectiveness of attribution training with 35 novice tennis players. Over the course of four training sessions, they were provided inaccurate feedback to persuade them to credit their accomplishments to internal factors. The participants, as anticipated, modified their attributions in response to the feedback, resulting in increased self-esteem and performance.

Achievement Goal Theory. Achievement goals have been emphasized by both psychologists and sport and exercise psychologists as a means of examining differences in motivation (Dweck, 1986; Maehr & Nicholls, 1980; Nicholls, 1984; Roberts, 2012). In accordance with Dweck, Elliot, and Nicholls' achievement goal theory, motivation is influenced by three essential components: achievement goals, perceived ability, and achievement behavior (Dweck, 1986; Elliot, 1999; Nicholls, 1984, 1989). To comprehend an individual's motivation, an understanding of their interpretation of success and failure is important. One of the most effective methods

to attain this is to look at how the individual examine how the individual's goals align with his perceptions of proficiency, self-value, and perceived capability.

According to the achievement goal theory, one's "interpretation" of what it takes to succeed motivates them (Dweck, 1986; Elliot, 1999; Nicholls, 1984, 1989). Nevertheless, what one person deems as being successful may differ from another. Surpassing competitors can be viewed as achievement, while acquiring knowledge or mastering a task can also be considered as being successful. When someone emphasizes exceeding another in a game, for instance, they are said to be "performance" involved, and when they aren't, they are said to be "ego" motivated. Nicholls distinguishes between two types of achievement motivation, task orientation and ego orientation highlighting that they do not have to be mutually incompatible, and they can coexist in the same individual (Nicholls, 1989)

Certain athletes like to look at performance in comparison to others, while others give preference to reflecting on their prior performances. According to these inclinations, athletes can be categorized as task-oriented or ego-oriented (Jarvis, 2006). Steinberg et al. (2001) examined the development of 72 beginner golfers who were allocated to one of four training settings: Training in the first condition was solely focused on competition; in the second, it was only focused on task mastering; in the third, there was a balance of mastery and competition; and in the fourth, there was no systematic orientation toward tasks or competition. Remarkably, the third group who received mixed training approach had substantial improvement in their performances after 6 weeks.

*Approach Versus Avoidance Achievement Goals***:** The approach and avoidance dimensions of objectives are another aspect of achievement goal theory (Elliott, 1999). In addition to ego and task goal orientations, researchers contend that people's perceptions of competence are characterized by either approach goals, in which the athlete or exerciser focuses on achieving competence, or avoidance goals, in which the athlete or exerciser focuses on avoiding incompetence. As a result, an individual can be task-oriented, task avoidance, ego approach or ego avoidance. Approach goals (both task and ego) are favorably linked to university students'

physical activity levels, according to research (Lochbaumet al., 2013). Approach and avoidance goals have been linked to physical activity motivation in other research (Moreno, Gonzales-Cutre, Sicilia, & Spray, 2010; Nien & Duda, 2008; Wang, Liu, Lochbaum, & Stevenson, 2009). According to the research conducted by Ingledew and Markland (2008), sport and exercise practitioners should prioritize approach goals over avoidance goals in their interventions.

Competence Motivation Theory. This theory has been used to explain differences in achievement behavior, especially in children, is competence motivation theory (Weiss & Chaumeton, 1992; Weiss & Ambrose, 2008). Based on the work of developmental psychologist Susan Harter (1988), this theory holds that people are motivated to feel worthy or competent and, moreover, that such feelings are the primary determinants of motivation. Competence motivation theory also contends that athletes' perceptions of control (feeling control over whether they can learn and perform skills) work along with self-worth and competence evaluations to influence their motivation. These emotions, on the contrary, have no direct effect on motivation. Rather, they impact affective or emotional states such as pleasure, fear, pride, and guilt, which drive motivation. It's also crucial to understand that one's competency varies across areas such as academic, physical, social aspects.

Achievement Motivation and Sports

Achievement motivation is characterized by a desire to succeed in learning activities as well as the ability to experience tried-and-true achievement (Mc Clelland et al., 1953). According to McClelland (1961), the individual's need for substantial success, skill mastery, control, or high standards is referred to as a need for achievement. People with a high need for achievement are those that strive for greatness in a field for the intention of achieving rather than for a reward. As athletic success is frequently measured in comparison to that of competitors, achievement motivation has often been associated with competitiveness. Athletes' predispositions toward aiming for success, as well as how specific events impact their aspirations, emotions, and behaviors, are the central issue of achievement motivation (Tod, 2014).

An individual with high achievement motivation is defined as someone who "aspires to complete tough tasks; maintains high standards and is willing to strive toward distant goals; responds positively to competition; and is willing to put out effort to achieve excellence" (Jackson, 1974/1999, p. 6). As researchers investigate personal decision, determination, and perseverance in association with physical activities, achievement motivation continues to be a major topic in the field of sport psychology. Numerous studies on achievement motivation have made use of Nicholls' goal perspective theory (1984, 1989). According to the theoretical perspective, individuals aim towards showing their superior skills while avoiding revealing their inferior skills. Furthermore, the definitions of success and failure are founded on two-goal orientations. A task goal orientation stresses effort, task mastery, and performance improvement and is characterized by self-referenced perceptions of competence.

There are three types of achievement motivation: hope for success (active approach), fear of failure (active avoidance), and fear of success (passive avoidance) (Birney et al., 1969; Heckhausen, 1963; McClelland et al., 1953; Schultheiss & Brunstein, 2005). The achievement motives which are hope for success and fear of failure are the theories that are now being explored in talent study in sports. (Elbe & Beckmann, 2006; Halvari & Tomassen, 1997; Höner & Feichtinger, 2016; Sagar et al., 2015; Zuber & Conzelmann, 2014).

Research indicates that when prior achievement behavior was accompanied by adverse outcomes, people are more inclined to repress their desire to achieve, which is the fear of success. (Karabenick, 1977). Early childhood experiences of reward and affection for mastery, as well as child-rearing techniques emphasizing early independence, are linked to an achievement motivation characterized by hope for success (McClelland & Pilon, 1983; Winterbottom, 1958). Punishment for absent achievement-oriented behavior, on the other hand, is likely to encourage an individual to develop deliberate avoiding of responsibilities (fear of failure). Mastering a task is linked to the absence of punishment, which keeps people motivated to achieve. People who have a high fear of failure and persons who have a

high hope of success have a preference for mastery experiences, even though their learning experiences are different (Schultheiss & Brunstein, 2005).

Whether a person will approach or avoid an achievement-related opportunity is influenced by his or her achievement motivation (Atkinson, 1957). The positive relationship between hope for success and athletic performance has been experimentally validated in both cross-sectional (Coetzee et al., 2006; Halvari & Tomassen, 1997) and longitudinal research (Elbe & Beckmann, 2006; Murr et al., 2018; Unierzyski, 2003; Zuber & Conzelmann, 2014). Fear of failure, on the other hand, is frequently linked to poor performance (Halvari & Tomassen, 1997; Sagar et al., 2010). Where achievement motivation drives activities toward competence, achievement goal orientations direct these efforts toward specific targets. It is divided into two or three different goal orientations, which are referred to as task and ego orientation (Nicholls, 1984) or mastery and performance orientation (Ames & Murray (1938, pp.80-81).

Motivational profiles and achievement motivation have been shown to have substantial significance for sports programs in terms of identifying potential and developing young competent athletes. Positive mental traits are more prevalent in the ones having those with high achievement motivation, self-determination, and intrinsic motivation. Athletes who are intrinsically driven and task-oriented are more likely to enjoy engaging in sports and are less likely to drop out, according to most research. The achievement motive, or the desire to achieve, is the foundation of achievement motivation. Those who participate in an activity with the intention of achieving a goal are said to be working in the spirit of achievement motivation

Smith and colleagues' (2020) study reveals that our understanding of the consequences, cognition, and behavior associated with achievement motivation has increased. Although different theories on achievement motivation share many similarities, they have developed autonomously, suggesting that the majority of these approaches are complementary rather than contradictory. As motivation is one of the most important aspects of human personality (Anil, 2016) It aids in the shaping and direction of a person's activities, resulting in a more or less dynamic personality.

Other psychological factors and skills do not offer the drive for achievement unless there is a desire to succeed. As the goal of achievement motivation is to achieve success and fulfill all of our life goals achievement goals can influence how a person undertakes a task and indicate a desire to showcase proficiency (Harackiewicz, Barron, Carter, Lehto, & Elliot, 1997).

Individuals driven by achievement motivation tend to select activities and environments where they can best showcase their capabilities. These motivated individuals demonstrate a higher proficiency in accomplishing complex, long-term tasks and exhibit increased perseverance, aligning with the notion that motivation influences their choice of pursuits and resilience in overcoming challenges (Atkinson & Feather, 1966). Butt and Cox (1992) looked at the relationship between achievement motivation and tennis players' performance levels. among elite, intermediate, and recreational male tennis players. The research involved participants from various skill levels, including Davis Cup-caliber players, university team members, and recreational players. The results revealed significant differences in ambition, aggression, competence, competition, and control among the three groups, with the elite Davis Cup group scoring the highest on all variables. The study highlights distinctions in motivational factors based on the athletes' skill levels in tennis indicating that strong achievement motivation is a key element in differentiating high-level performers (Butt & Cox, 1992).

Self-Efficacy and Sports

Research studies have demonstrated that the self-efficacy concept is considered one of the most influential psychological elements affecting athletic success (Ewart et al., 1986; Yuan-yuan, 2005; Jackson, 2010; Ay et al., 2013).

Self-efficacy is described as a person's belief in his or her capacity to do a task successfully (Gore, 2006). Self-efficacy is a social cognitive theory concept that defines one's perception of one's ability to complete a given activity and achieve a specific result (Bandura, 1997). It is not concerned with a person's abilities, but rather with a personal evaluation of what an individual can do with the abilities that

he or she possesses. Self-efficacy beliefs may impact motivation in a variety of ways, including the activities people choose to pursue or the effort they put into them, as well as emotional reactions to failure or unpleasant stimuli (Bandura, 1997).

Within the context of social cognitive theory, Bandura's (1977) theory of self-efficacy was formed. Although the theory was originally proposed to explain the discrepancies in results achieved by various clinical psychology methods for the treatment of anxiety, it has since been expanded and applied to other domains of psychosocial functioning, such as health and exercise behavior (McAuley, 1992a; McAuley & Mihalko 1998; O'Leary, 1985), and sport and motor performance (McAuley, 1992b; McAuley & Mihalko 1998; O'Leary, 1985). (Feltz, 1988).

People are seen as being responsible for their cognitions and functioning in social cognitive theory where they have the ability to assess and evaluate their own skills, plan future activities, and manage their conduct (Bandura, 1989). Self-efficacy belief, according to Bandura (1977), is a typical cognitive process that mediates between sources of people's self-appraisal and their subsequent motivation, as well as their thinking patterns, emotional reactions, and behavior. Efficacy beliefs are the result of a complicated self-appraisal process that relies on the cognitive processing of an array of efficacy information sources (Bandura, 1997). Bandura (1997) classified these sources of information as previous performance successes, vicarious experiences, verbal persuasion, and physiological conditions. People's efficacy beliefs, in turn, are believed to have an impact on the tasks they take on, the work they put in, and their endurance in the face of adversity. Certain thinking patterns and emotional reactions, including pride, guilt, happiness, and sadness, are considered to be influenced by efficacy judgments, which again drive motivation. These motivated behaviors and thinking processes, as Feltz et al. (2008) point out, are key contributors to athletic performance. High-efficacious athletes aren’t afraid in pursuing tough goal, they can deal hardship and continue to persist when facing challenges. Low self-efficacious avoid challenging goals, get concerned about potential damage, do not give their best in the task and quit easily when facing failure.

Bandura (1977, 1997) has qualified the predictive value of self-efficacy judgments, emphasizing that self-efficacy beliefs become a key driver of action and performance only when individuals possess sufficient incentives to act on their self-perceptions and when they have acquired the necessary skills (Bandura, 1977, 1997). Some people may possess the required skills and have strong self-efficacy beliefs, but they lack the motivation to succeed. When there are minimal incentives to execute the task, and, in cases where performances are restricted either physically or socially, self-efficacy perceptions outperform actual performance. Discrepancies between efficacy views and performance might emerge when activities or circumstances are complicated or unclear, or when there is insufficient information on which to make efficacy judgments (Bandura, 1977, 1997). When acquiring a skill, for example, there is limited experience on which to make an accurate efficacy assessment. Similarly, complicated activities may make it more difficult to correctly judge one's capabilities (Feltz & Öncü, 2014).

Variation in intrinsic and extrinsic incentives, along with the athlete's evaluations, influence why athletes want to participate. In other words, an athlete is more inclined to engage if he or she feels he or she can succeed. This is referred to as self-confidence or self-efficacy in sport psychology where high self-efficacy is a belief in one's ability to do a task at a high level, with certainty, and over time (Bandura, 1977). Studies have demonstrated that athletes with high self-efficacy strive harder, persevere longer, select stronger challenges, have a more pleasant experience with effort, and are less nervous (Zagórska & Guszkowska, 2014.; Mouloud et al., 2015). Coaches, players, and even spectators must comprehend the notion of self-efficacy for a variety of reasons. For instance, as a coach, understanding how players are feeling and thinking about their abilities, competencies, and strength is critical to their growth. Second, gaining a deeper grasp of an athlete's mentality can help them perform better in sports (Moritz et al., 2000).

According to Schunk (1995), self-efficacy aids in the prediction of motivation and performance encourages individuals to increase their competence and is linked to perseverance and accomplishment. Self-efficacy is linked to goals and achievement

outcomes, according to preliminary studies. While confronting a difficult or demanding task, an individual who is high in self-efficacy view the difficulty in terms of something to learn and conquer. Pushing themselves toward the challenging but attainable objective is fueled by their eagerness to complete the work and their desire to achieve. Others with high self-efficacy attempt to gain a greater quantity of information and increase their effort to overcome their failures and setbacks, whereas people with low self-efficacy may feel the work is unattainable (Pajares & Schunk, 2001).

When it comes to professional sports, individuals displaying high self-efficacy are inclined to attend training sessions regularly, invest substantial effort, and display greater persistence compared to those with low self-efficacy, all while establishing higher goals and nurturing more beneficial thoughts and emotions (Tod, 2014). They might stand a higher chance of succeeding as a result. Extensive research consistently shows that higher self-efficacy levels are correlated with improved performance, as illustrated by Niemivirta and Tapola's (2007) study, which revealed that changes in individuals' inherent self-efficacy levels were linked to variations in task performance. Bouffard-Bouchard (1990), manipulated levels of self-efficacy positively influenced cognitive task performance Bouffard-Bouchard (1990), manipulated levels of self-efficacy positively influenced cognitive task performance Bouffard-Bouchard (1990), manipulated levels of self-efficacy positively influenced cognitive task performance Bouffard-Bouchard (1990), manipulated levels of self-efficacy positively influenced cognitive task performance Bouffard-Bouchard (1990), manipulated levels of self-efficacy positively influenced cognitive task performance Bouffard-Bouchard (1990), manipulated levels of self-efficacy positively influenced cognitive task performance Additionally, both Wu et al. (2011) and Sivrikaya (2019) investigated the relationship between self-efficacy and performance, further supporting the conclusion that elevated self-efficacy is linked to enhanced performance. Bandura (1977, 1986) divided four groups which shape individuals' sources of influence: impact of accomplishments in previous performances or mastering a task, the influential role of learning and observing from others, the persuasive force of verbal communication, and the significance of

arousing emotions and physiological sensations. Athletes with strong self-efficacy typically work harder, persevere with a task longer, and achieve greater results than athletes who question their skills (Barker & Jones, 2006)

Self-efficacy is believed to affect which activities people choose to engage in, how much effort they put into them, and how persistent they are in the face of failure or unpleasant stimuli (Bandura, 1997). More specifically, the stronger the efficacy, the stronger the desire to challenge yourself and achieve your goals. The most widely deployed theory for studying self-confidence in sport and motor performance is Bandura's (1977) notion of self-efficacy. Schmidt and DeShon (2009) caution, however, of the dangers of overestimation and self-assessment of self-efficacy. If an athlete has a strong belief in his ability to achieve, he will devote less time and energy to work out, resulting in less achievement.

Self-efficacy has been explored with various factors in sport and has been the subject of several researches. Villani et al. (2015) conducted a study on improving self-efficacy using blended training where the findings of the study with basketball players revealed that athletes who received web-based interactive training reported improved levels of self-efficacy while no significant changes were observed in the control group. Following the program, both sets of participants indicated a decline in the act of suppressing emotions, with no notable differences detected in cognitive reappraisal.

Trainers, along with players from all sorts of sports, are starting to understand the crucial role of the psychological aspect of sport performance in recent decades. Athletes' success is determined not only by physical abilities, but also by psychological abilities, according to sports experts (Mouloud & El-Kadder, 2016). Self-efficacy is a key component of mental training (Barling & Abel, 1983; Birrer & Morgan, 2010; Feltz, Short, & Sullivan, 2008; Zagórska& Guszkowska, 2014), among other psychological abilities.

A person with positive self-perceptions and high self-efficacy does not feel threatened by risk or adversity and can view problems as opportunities rather than

problems (Martin, 2012). Increased self-efficacy keeps people motivated and helps them learn new skills (Schunk, 1991). Self-efficacy is linked to a strong sense of well-being and strong self-esteem. Their proactive stance involves taking the lead across associated domains, exert effort when necessary, and persist in efforts as long as they believe in their efficacy. In highly self-efficient people, potentially stressful events cause low subjective stress. While self-efficacy can help people manage stress, it can also cause stress by encouraging excessively ambitious people to take on more tasks than they are capable of handling.

Self-efficacy beliefs impact behaviors that can change one's life and are an essential element of human motivation and behavior. Self-Efficacy Theory's main premise is that people are more likely to engage in activities for which they have high self-efficacy and less likely to engage in those for which they do not (Van der Bijl & Shortridge-Baggett, 2002)

Self-efficacy beliefs have been shown to have positive influences on effort, persistence, goal setting, and performance (Pajares, 2009 On occasion, heightened self-efficacy might lead to subsequent decrease of work efficiency, as it can result in an overestimation of a person’s capabilities, creating false perception of competency. Overconfidence may lead to the wrong technique being used, making mistakes, refusing to accept blame, and rejecting constructive criticism (Clark, 2001). Overconfidence can also lead to a reduction in effort and focus on the activity (Stone, 1994).

Self-efficacy has been linked to improved performance (McIntire & Levine, 1991; Mathieu, Martineau, & Tannenbaum, 1993; Eden & Zuk, 1995; Locke & Latham, 1990; Stajkovic & Luthans, 1998; as cited in Redmond, 2010). People with high self-efficacy win more frequently and better than people with low self-efficacy (Mitchell, Hopper, Daniels, George-Falvy, & James, 1994; as cited in Redmond, 2010). According to research, a person with a higher level of self-efficacy will persevere longer and be more resilient and determined in their efforts than a person with a lesser level (Feltz et al., 2008). Self-efficacy has become one of the best predictors of physical activity behaviors in the sport and exercise domains (Hu, Motl,

McAuley, & Konopack, 2007). Bandura (1997) says that while having the confidence in one's abilities to be able to apply such talents in a specific situation is key, physical skills and ability are important to the effective completion of a physical task. In contrast to lower self- efficacious individuals who shy away from difficulties as well as are more inclined to quit, people with a high degree of self-efficacy are less reluctant to take on demanding tasks, endure hardships and persist despite hardships (Bandura, 1997). Self-efficacy beliefs affect people's decision to exercise or participate in a sport, as well as their emotional reactions to the activity, how much they like it overall, and how much effort they put out (Bandura, 1986; Martin & Gill, 1995).

The Self-efficacy hypothesis offers a cognitive explanation for disparities in people's, teams', and organizational leaders' ability in undertaking difficult assignments, including the ones in the sports field (Bandura, 1977, 1997). In fact, one of the most significant psychological variables influencing achievement striving in sports is self-efficacy. (Feltz, 1988b, 1994). People are driven to maintain regular exercise routines for varied reasons, and a notable factor is their confidence in performing well; the proven impact of perceived self-efficacy emerges as a pivotal motivator for establishing and sustaining fitness goals over an extended period, as studied by Desharnais et al. (1986), Long and Haney (1988), Sallis et al. (1986), Sallis et al., (1992), and Wurtele and Maddux (1993).Tests evaluating the impact of efficacy beliefs in tennis performance found that perceived efficacy was connected to 12 rated performance parameters (Barling & Abel, 1983)

According to the self-efficacy theory, efficacy expectations are linked to effective performance (Bandura, 1997; Moritz et al., 2000). Lane et al. (2004) found a substantial connection between self-efficacy and performance in their study. One of the most significant elements affecting an athlete's performance is their self-efficacy belief (Hardy, Woodman & Carrington, 2004). The majority of research that looked at the interaction between performance and self-efficacy found it to be favorable. For example, according to Beauchamp et al. (2002), athletes who do well have greater levels of self-efficacy, whereas athletes who perform poorly have lower levels of

self-efficacy. To achieve competent and satisfying performance, self-efficacy plays a vital role according to Bandura's theory (Bandura, 1977, 1982). Higher self-efficacy belief and optimum emotional arousal generate greater performance in competitive settings (Bandura, 1982). Researchers in the sports area have validated Bandura's model (Feltz & Mugno, 1983; Gould & Weiss, 1981).

Self-Regulation and Sports

Self-regulation has been extensively researched in a range of fields, including academics (e.g., Zimmerman, 1986, 1998, 2002), sports (e.g., Cleary & Zimmerman, 2001), music (e.g., Zimmerman, 1986, 1998, 2002) as well as in physical education (Kitsantas & Zimmerman, 1998; Nielsen, 2001). Self-regulation can enhance performance, according to studies on the topic of self-regulation and athletic performance (Anshel & Porter, 1996; Kirschenbaum & Bale, 1986; Kirschenbaum et al., 1982). According to Chen and Singer (1992), successful athletes are able to recognise disparities between where they are and where they can and want to be. According to Anshel & Porter (1996) and Kirschenbaum et al. (1982), athletes who are unable to self-regulate in this way are less likely to perform at their peak. As a result, some athletes may be more likely than others to reach elite status due to their propensity for self-regulation (Anshel & Porter, 1996).

Self-regulation refers to how much control learners have over their own learning in order to master a task and develop (Zimmerman, 1989, 2006). Self-regulated students prepare their performances ahead of time, keep track of whether they're on track throughout the performance, and analyze their results afterwards. Self-regulated learners reflect on their learning process continually during these planning, monitoring, and evaluation cycles, allowing them to apply past knowledge and methods to future activities (Ertmer & Newby, 1996; Zimmerman, 2006). Self-regulated learners must be willing to engage in effective forms of self-regulation (i.e they must be willing to put consistent effort into their performances) and believe in their ability to execute actions successfully (Bandura, 1997; Ericsson et al., 1993; Zimmerman, 2006). Self-regulation is the degree to which gifted athletes are meta-

cognitively, motivationally, and behaviorally proactive participants in their learning process (Pintrich, 2000; Zimmerman, 1986, 2006).

Self-regulation, in a broader sense, refers to the control of one's behavior and emotions while pursuing one's objectives, which includes goal setting and both effortful and automated types of goal-driven behavior (de Ridder et al. 2012; Fujita 2011). People use self-regulation throughout the day and in an array of domains (e.g., work, leisure, health, sex, alcohol, smoking, cleanliness, sleep) to achieve both short-term and long-term goals (Hofmann et al. 2012). Even though these actions are all related to different goals (being healthy, saving money, and keeping a job), they are all examples of situations where behavior regulation is necessary to achieve the desired result.

The importance of using self-regulatory abilities in both sports and academics has been stressed as a way to learn more effectively and enhance performance. Expert sportsmen, for example, are better able to create precise attainment goals and choose the best effective approach to reach these self-made goals, according to Cleary and Zimmerman (2001). In the past few years, scholars have been debating if self-regulation skills are specific to certain areas or if individuals can use these skills in different areas, showing versatility.Self-regulatory abilities are believed to emerge as domain-specific techniques between the ages of 2 to 6 years, and by the age of 12, individuals are thought to consciously employ these skills, with their abilities becoming more domain-general and applicable across a variety of performance domains (Van der Stel & Veenman, 2008; Veenman & Spaans, 2005; Zelazo & Müller, 2002), meaning that they can be applied to a range of performance domains. Furthermore, the practice of self-regulatory skills can be incited (Cleary et al., 2008; Peters & Kitsantas, 2010). Thus, the application of self-regulation abilities appears to be especially useful for elite young athletes aspiring to excel, as it empowers them in maximizing their study period while additionally assisting in balancing academic careers alongside their substantial involvement in athletic field.

It is well understood that the development of self-regulation abilities do not occur spontaneously. The processes for how and when to complete a given task, such

as the execution of an appropriate action during a game, are referred to as procedural knowledge (French & Thomas, 1987; Williams & Davids, 1995). In 12- to 18-year-old kids, the application of self-regulatory abilities has been proven to be helpful to athletic (Anshel, 1995; Anshel & Porter, 1996; Jonker et al., 2010a, 2010b; Toering et al., 2009) as well as to academic performance (Cleary & Chen, 2009; Miller, 2000; Miller & Byrnes, 2001; Roeschl-Heils et al., 2003; Veenman & Spaans, 2005; Veenman et al., 2005; Wolters, 1999)

Previous studies have found that elite athletes are used to working on self-conscious, goal-oriented, and problem-focused behaviors in a goal-directed environment with the intent of enhancing their performances (Durand-Bush & Salmela, 2002; Orlick & Partington, 1988; Van Yperen & Duda, 1999). This is evident in their capacity to handle a tight schedule between training, competitions, and school (Durand-Bush & Salmela, 2002), as well as their ability to spend their leisure time more efficiently than the general teenage population (Brettschneider 1999) Furthermore, research in both sports and academic contexts shows that specialists in specific fields have stronger self-regulatory skills than non-experts (Cleary & Zimmerman, 2001; Ertmer & Newby, 1996; Zimmerman, 1998) and that athletic and academic tasks are similar (Zimmerman & Kitsantas, 1996). Self-regulatory abilities, in particular, may be transferred from one domain to another due to their features and universality (Boekaerts, 1999; Ferrari, Pinard, Reid, & Bouffard-Bouchard, 1991; Kirschenbaum, 1984). Self-regulation, according to Zimmerman (1986), refers to the cognitive, motivational, and behavioral processes that learners employ to improve their learning.

Aside from its significance in expert performance, the value of self-regulation has also been found in related domains such as effective time management and high-level achievements in competitive settings (Moon, 2003; Zimmerman & Martinez-Pons, 1986). According to previous studies, older students are more self-regulatory than their younger counterparts (Al-Hilawani, 2003; Pintrich & Zusho; Zimmerman & Martinez-Pons, 1990). Furthermore, there have been conflicting findings in the use of self-regulatory skills in males and females (Anshel & Porter, 1996;

Zimmerman & Martinez-Pons), and students with lower SES are associated with lower levels of sports participation, lower levels of self-regulation, and more academic problems (Nota et al.; Sirin, 2005.).While the sports environment is rich in feedback and instruction and highly goal-directed, which might assist the development of self-regulatory abilities (Boekaerts & Corno, 2005; Pintrich & Zusho, 2002), it is also possible that elite young athletes compete at these high levels due to their frequent use of self-regulation, i.e., they have an inborn capacity to utilize their self-regulatory skills. Self-regulation is a cognitive construct that elite youth soccer players are said to be quite familiar with (Cleary & Zimmerman, 2001; Kirschenbaum, 1984). This is due in part to the fact that the level of play in soccer has grown substantially in recent decades (Kuhn, 2005).

Various cognition related components impact expert performance in addition to the athlete's physical preparation. Athletes may also enhance their self-regulation abilities by defining personal goals for achievement and development and obtaining constant feedback from coaches on the performance process and the action itself, which marks the uniqueness of the sports environment (Cleary, Zimmerman, & Keating, 2006; Jonker et al., 2009; Pintrich & Zusho, 2002).

Researchers have demonstrated how professionals in sports are well-versed in their ability to regulate themselves their respective methods of learning, emphasizing how sl-rg are necessary at these intensive events (Cleary & Zimmerman, 2001; Eccles & Feltovich, 2008; Kirschenbaum, 1984; Nota et al., 2004). Toering et al. (2009) found that that exceptional young soccer athletes claim to utilize their self-regulatory abilities with greater regularity than young soccer professionals who simply play for fun. Elite youth soccer players, according to Jonker (2011), may gain more from training and competition since it allows them to reflect more on their prior performances, allowing them to complete tasks with a higher degree of success. In disciplines such as athletics, the application of self-regulatory abilities is frequently linked to success. (Anshel & Porter, 1996; Jonker, ElferinkGemser, & Visscher, in press; Kitsantas & Zimmerman, 2002).

Older and younger kids utilize self-regulatory abilities differently (Al-Hilawani, 2003), and the socioeconomic position may be linked to sports involvement, self-regulation, and academic achievement (Kamphuis et al., 2008; Nota et al., 2004; Sirin, 2005). Children learn self-regulation abilities best in a strong, motivating, and goal-oriented environment (Boekaerts, 1997), with youth athletics being suggested as an ideal setting. To elaborate, elite athletes must commit to at least 10 years of prolonged and effortful training sessions (i.e., intentional practice) to develop and meet the growing demands of higher levels of competition (Boekaerts & Corno, 2005; Ericsson, Krampe, & TeschRömer, 1993). According to deliberate practice theory, skilled athletes should be self-aware, goal-oriented, and highly self-regulatory to get the most out of their training time (Cleary & Zimmerman, 2001; Ericsson et al., 1993; Jonker et al., in press).

Previous research has shown that self-regulation is especially important in individual sports, where the environment is generally constant throughout performance (Anshel, 1995; Elferink-Gemser et al., 2008; Highlen & Bennet, 1983), and where many hours are spent practicing and competing. To reach expert performance, according to Ericsson (1996, 2003; Ericsson et al., 1993), it requires at least 10,000 hours of deliberate training, sometimes over 10 years or more (e.g., 8000–10,000 hours in wrestling and figure skating; Starkes, Deakin, Allard, Hodges, & Hayes, 1996). Team sport athletes, on the other hand, have admitted to needing much shorter amount of practice time (around 3000–4000 hours) in attaining expertise level (Baker et al., 2003; Helsen et al., 1998; Soberlak & Côté, 2003; Starkes, 2000). Goal-setting and proper feedback are recommended to aid athletes in developing self-regulatory abilities that enable them to alter their learning in a constructive way (Boekaerts & Corno, 2005; Pintrich & Zusho, 2002). The most successful trainers stressed the athletes' responsibility for learning and using self-regulatory skills (Elferink-Gemser, Roskam, & Visscher, 2010). Variations in athletic performance among athletes may also stem from age and gender differences, with older individuals generally exhibiting higher levels of self-control compared to their younger counterparts (Al-Hilawani, 2003; Pintrich & Zusho, 2002; Zimmerman & Martinez-Pons, 1990). There is a discrepancy among research when it comes to

gender (Anshel & Porter, 1996; De Jager & Reezigt, 1996; Zimmerman & Martinez-Pons, 1990). In a group of elite athletes, a previous study found eminently minor gender differences in self-regulation (Anshel & Porter, 1996).

Self-regulation has been defined as the mechanisms that assist people to manage their thoughts, feelings, and behaviours (Baumeister & Vohs, 2004). Self-regulation of learning, according to Zimmerman (2008), refers to self-initiated procedures that enable individuals to translate their mental capacities into performance skills. Researches have demonstrated that individuals who are expertise in sport exhibit superior Self-regulation compared to non-experts and beginners, whereas, a lack of it has been linked to decreased performance (Anshel & Porter, 1996; Cleary & Zimmerman, 2001; Jordet, 2009a, 2009b; Kitsantas & Zimmerman, 2002).

The following provides a comprehensive review of literature on psychological skills training, achievement motivation, self-efficacy, self-regulation, and other relevant topics in the field of sports psychology. The area of sports psychology has experienced a remarkable increase in research activities, driven by the increasing recognition of the pivotal role played by mental aspects in athletic performance. As sports have gained tremendous momentum and broadened into an extensive number of disciplines, the importance of honing mental skills to enhance performance has become ever more evident. The growing importance of this phenomenon has led to an abundance of research focused on understanding the complex connection between psychological components and athlete’s success. As a result, the amount of literature in this subject matter has grown rapidly. An attempt is made to create an in-depth analysis of the extensive body of literature that has accumulated in this field, in an effort to deliver a comprehensive understanding of the key concepts, ideas, and empirical findings that underpin the intersection of psychology and sports. The profound importance of mental skills in the domain of sports performance has led to a notable increase in the emphasis on psychological skills training. As the sports industry evolves and grows, so does the recognition that learning to develop the necessary psychological skills is critical to athletes' success.

This increasing awareness has driven a constant growth in the volume of literature devoted to these issues. Researchers, coaches, and athletes are becoming more aware of the crucial importance of mental strength, self-regulation, self-efficacy, and other psychological components in optimizing sports performance. As a result, the growing interest in this topic has resulted in numerous studies, ideas, and practical applications focused on improving athletes' potential by enhancing their mental skills. This chapter explores the growing field of sports psychology literature to offer insights into the complexities of the dynamic connection between the mind and athletic performance.

The phrase "motivational training" in this study refers to a modified version of psychological skills training that specifically aims to improve athletes' motivation, self-efficacy, self-regulation and performance. Although there is a scarcity of research explicitly employing the phrase "motivational training" in the sports context, the idea is consistent with the more comprehensive framework of psychological skills training. Extensive research has been conducted on psychological skills training, which has been acknowledged as a very effective method for improving athletes' mental capabilities and maximizing performance results.

By adapting and modifying existing psychological skills training techniques, this study aims to specifically target and enhance athletes' motivation, self-efficacy, and self-regulation, which are key factors in determining athletic success. The modified training program incorporates motivational strategies, goal-setting techniques, visualization exercises, and self-monitoring practices to foster athletes' intrinsic motivation, enhance their belief in their capabilities, and develop effective self-regulation and self-efficacy skills. While the terminology may vary, both motivational training and psychological skills training are based on similar fundamental principles. The modified technique utilizes well-established theories and empirical findings that promote the effectiveness of psychological skills training in sports settings. This study intends to contribute to the body of literature by studying the impact of this modified type of psychological skills training on Mizo professional

athletes by focusing on motivational aspects of the training program. Although there may not be literature specifically focused on "motivational training," the rationale behind it is to modify and adapt current psychological skills training to include motivational aspects. This approach acknowledges and builds upon the existing literature on psychological skills training, while offering a novel perspective by emphasizing the motivational aspects in enhancing athletes' self-efficacy, self-regulation, and overall performance outcomes

Psychological skills can benefit athletes in various scenarios, including learning new skills (Waskiewicz & Zajac, 2001), facing challenging circumstances like injuries (Rose & Jevne, 1993), and performing effectively in important events (Gould et al., 1992a; Gould et al., 1992b). In their study, Jackson and colleagues (2001) examined the correlation between psychological skills and the flow state. They found a positive association between flow and the application of psychological skills, which indirectly supports the idea that enhancing the use of mental skills can enhance sports performance. MST utilizes sport-specific mental skills such as goal planning, relaxation, visualization, and self-talk, which are commonly mentioned as the fundamental mental skills in the literature on psychological skills training.

The sequence of reviews would be as follows:

2.1 Psychological Skills Training in Sports

2.2 Achievement Motivation and Sports

2.3 Self-Efficacy and Sports Performance:

- 2.3a Review of studies on Self-Efficacy and sports performance.
- 2.3b Analysis of the impact of mental related training on athletes' Self-Efficacy beliefs.

2.4 Self-Regulation and Sports Performance:

- 2.3a Review of studies on Self-Regulation and sports performance.

- 2.3b Analysis of the impact of mental related training on athletes' Self-Regulation

2.1 Psychological Skills Training in Sports

Thelwell et al. (2006) conducted a study to evaluate the impact of a psychological skills intervention for soccer midfielders across a competitive league season. The purpose of the research was to broaden the understanding regarding psychological skill interventions in team athletics. The participants consisted of five male midfield players who were part of a university 1st team squad. They had limited knowledge of sport psychology and had no prior skills training. The intervention comprised of relaxation techniques, mental imagery, and self-talk, administered by a sport psychologist who is accredited by BASES. First touch percentage, pass, and tackle percentages were the dependent variables that were measured. The intervention was implemented throughout the course of nine matches at various points, using a single-subject, multiple-baseline-across-individuals design. The findings indicated that every participant showed improvements in their initial touch proficiency, but with varying degrees of progress. Four participants exhibited significant improvements in all measured categories, but one participant consistently performed at the average level. The findings indicate that the implementation of psychological skills training can improve both performance and consistency, hence providing advantages to players, coaches, and sport psychology consultants. The study highlights the importance of sports and position-specific psychological skills in enhancing role-specific performance indicators. This study contributes to the current body of research by presenting empirical evidence that supports the advantages of implementing psychological skills training in soccer midfielders. Future studies could go deeper into the implications and practical uses of these findings for professionals in the field of sports psychology.

In their study, Kumar & Saroha (2021) examined the effects of Individualized Psychological Skills Training (PST) on the performance of archers. The study employed a convenient sampling technique to select archers, specifically targeting individuals between the ages of 15 and 30 who had at least two years of training

experience. All competitors had a competitive background, having previously competed in state, national (school, junior, senior), and All India Inter University level tournaments. They were associated with the "Guru ki Mehar" Archery academy in Chandigarh. The study focused on a range of psychological skills, such as Relaxation, Imagery, Attention, Self-Confidence, Self-Talk, and Goal Setting. The selection of these talents was based on previous research conducted in the sector. An experimental Psychological Skills Training Program was prepared and executed over a period of 10 days to improve these skills. This program incorporated various components, such as relaxation training, which involved techniques like progressive muscle relaxation, breathing exercises, autogenic training, and mantra meditation. The PST program was organized into distinct phases that covered education, awareness, skill enhancement, practical application, and evaluation. Archers had comprehensive training in all facets of psychological skills with the purpose of optimizing their performance. The data collection process consisted of three distinct steps. The pre-test and post-test scores were evaluated using descriptive statistics and t-tests. Following the completion of the PST program, there was a significant improvement in the regulation of arousal, characterized by a noteworthy percentage rise of 22.00%, 36.08%, and 35.00%. The study found a substantial improvement in goal-setting abilities, with percentage increases of 33.30% and 38.00%. The archers demonstrated notable improvements in their visualization skills, with percentage increases of 17.60% and 11.70%. While there was no significant difference in attention between the before and post-test, it is important to highlight that a particular subject saw a 66.66% percentage change, suggesting a favorable improvement in their attention skills. Although the overall outcome for the group was not statistically significant, individual archers did show improvements. The PST program did not lead to a meaningful change in motivation at the group level, but it did result in an 11.11% improvement in a particular area. The program had a good impact on motivation in certain instances, while it was not statistically significant for the full group. Notably, self-awareness had a substantial improvement, with percentage increases of 14.00%, 05.20%, and 19.00%. Ultimately, this study demonstrated that archers who participated in the PST program had improved performance. Significant improvements were observed in specific psychological variables, including arousal,

goal setting, imagery, and self-awareness. Although Attention, Motivation, and Self-Confidence showed favorable improvements, these changes were not statistically significant.

The study done by Sheard and Golby (2006) examined the impact of a seven-week program focused on enhancing psychological abilities on both competitive swimming performance and positive psychological development. The study involved a cohort of thirty-six elite swimmers at the national level, consisting of 13 males and 23 females, with an average age of 13.9 years. The participants committed to a 45-minute per week program called PST, which encompassed several elements such as goal setting, visualization, relaxation, concentration, and thought stopping. The researchers acquired performance times from official meets to evaluate the effects of the intervention. In addition, the participants filled out seven inventories to assess the quality of their performance and six positive psychological traits, namely mental toughness, hardiness, self-esteem, self-efficacy, dispositional optimism, and positive affectivity. The study's findings demonstrated a noteworthy improvement in three distinct swimming techniques, each covering a distance of 200 meters, after the completion of the PST program. Nevertheless, the improvements in 10 other events were considered to lack statistical significance. Moreover, there was an overall improvement in the subjects' positive psychological profiles following the intervention.

In their study, Thomas and Fogarty (1997) examined how training in imagery and self-talk impacted the psychological skills and performance of amateur golfers. They specifically focussed on the influence of individual differences in cognitive preferences. The study featured a group of thirty-two men and women who actively participated in an intensive two-month training program. This program consisted of four counterbalanced workshops and activities that occurred at two distinct golf clubs. In order to evaluate the effects of the training, the researchers employed a repeated measures multivariate analysis of variance (MANOVA) to assess changes in five crucial psychological and psychomotor skills, as measured by the Golf Performance Survey. The skills included negative emotions and cognitions, mental

preparation, automaticity, putting skill, and seeking improvement. The study findings demonstrated noteworthy improvements in all five targeted skills after the conclusion of the imagery and self-talk training program. Participants demonstrated significant progress in effectively managing negative emotions and thoughts, improving mental preparedness, developing automaticity in their performance, honing their putting skills, and displaying a heightened motivation for seeking improvement. Additionally, the participants' responses to the Sport Imagery Questionnaire and their self-assessed ratings of imagery and self-talk techniques showed a significant increase following the completion of the training program. The results showed that the training in imagery and self-talk had a positive impact on the participants' cognitive processes and their ability to effectively employ these techniques to improve their golf performance. Moreover, the participants exhibited reduced handicaps and demonstrated significant improvement on a Golf Skills Test, providing further evidence of the effectiveness of the imagery and self-talk training program. The study revealed that there was no clear link between the training benefits and the cognitive preferences of the participants. This indicates that the golfers demonstrated cognitive flexibility by being able to adapt and use the training strategies effectively.

In 2005, Hanrahan conducted a study to investigate if a sport psychology-based psychological skills training program could improve the reported life satisfaction and overall sense of self-worth of adolescent Mexican orphans. The study involved a group of 34 adolescents who were administered self-perception and life satisfaction questionnaires. The program consisted 15 sessions that addressed several subjects including optimal activation, concentration, imagery, self-talk, time-management, and self-confidence. The sessions incorporated active exercises that fostered teamwork, effective communication, and trust on one another. The findings indicated a notable rise in overall self-esteem and subjective contentment with life among the program attendees. The participants, with an average duration of 6.97 years at the orphanage, derived benefits from the training irrespective of their gender or academic specialization. The study emphasized the beneficial effects of psychological skills training beyond the realm of athletics, indicating that these skills

can have value in diverse domains of life. Nevertheless, the study was limited by the absence of a control group for comparison. However, the small variation or decline noticed in those who attended fewer sessions indicated that the program's involvement was accountable for the identified enhancements. The results confirmed the notion that engaging in psychological skills training can yield advantages in developing skills that can be applied across various areas of life. Furthermore, the study noted a positive change in physical appearance self-concept, although this component was not specifically addressed in the program. The probable correlation between enhanced general well-being and a more positive self-perception of physical appearance was considered a reasonable explanation.

Beauchamp et al. (1996) conducted a study to assess the effects of a 14-week cognitive-behavioral teaching program on the motivation, preparation, and putting performance of novice golfers. The study conducted a comparison between the cognitive-behavioral program, a physical skills training group, and a control group. The researchers adapted the cognitive-behavioral program developed by Boutcher and Rotella (1987). They employed the Sport Motivation Scale to assess the intrinsic and introjected kinds of self-regulation. Observer ratings were used to evaluate preputt routines and actual putting performance. Participants underwent all measurements prior to the training and at three subsequent intervals evenly distributed over a period of four weeks. The results showed that those in the cognitive-behavioral program exhibited higher levels of intrinsic motivation, more regular utilization of preputt routines, and enhanced putting performance in comparison to the other two groups. In addition, individuals who took part in the cognitive-behavioral training showed a notable decrease in the the application of introjection. Introjection refers to a self-evaluative method of self-regulation that is similar to ego involvement. The findings are consistent with the conclusions made by Whelan, Myers, Berman, Bryant, and Mellon (1988), which emphasize the effectiveness of cognitive-behavioral methods in improving performance and indicate the presence of positive motivational effects related to these approaches.

In their study, Beauchamp et al. (2012) implemented an extensive program aimed at enhancing psychological skills in the Canadian National Short Track Speedskating team before to the Vancouver 2010 Olympic Games. Implemented over a span of three years, the program aimed to enhance sport performance by combining psychological skills training with biofeedback training. The curriculum specifically emphasized the use of self-regulation techniques to perform effectively in high-pressure situations. The program's approach was based on Thomas's (1990) seven-phase model. The biofeedback training protocols employed in the program were derived from the general guidelines presented by Wilson, Peper, and Moss (2006), who expanded on the previous study done by DeMichelis (2007) and the "Mind Room" program approach for improving athletic performance. The program aimed to provide athletes with the essential skills and strategies to perform at their best during the high-pressure environment of the Olympic Games, through the integration of psychological skills training and biofeedback techniques. It is worth mentioning that the absence of a control group prevents direct inference of causation. However, the team showed significant achievements in both team and individual levels. The program's holistic approach and focus on self-control were thought to enhance the team's successes, however further study is needed to show a cause-and-effect connection between the psychological skills training program and the observed results. The results underscore the potential of combining psychological skills training with biofeedback approaches to enhance athletic performance in high-stress competitive settings.

A study was carried out by Shoenfelt and Griffith (2008) with the objective of examining the implementation of a preseason mental skills program for intercollegiate volleyball serving players. The sample included 11 team members, with an average age of 20.0 years (standard deviation = 1.1), and an average of 2.6 years of college volleyball experience (standard deviation = 0.9). The program's objective was to train individuals in essential mental skills, including relaxation, imagery, attentional focus, goal planning, behavioral modeling, and performance routine. In order to enhance learning, a recorded behavioral model was used to clearly and effectively illustrate the essential technical skills required for successful

serving. The players were directed to integrate these performance factors and mental skills into a three-stage service routine, aiming to enhance the automaticity of their performance. The evaluation conducted at the end of the season demonstrated a significant association between the reported application of mental imagery and the use of a service routine, and the Good Serve Percentage, a measurement indicating successful serves. The team's mean Good Serve Percentage for the season was 49% with a standard deviation of 7, somewhat below the team's target of 50%. The study found that there was a notable improvement in serve-specific self-efficacy from the beginning of the training program to the completion of the season. In general, the results showed that the implementation of the mental skills training program led to an enhanced performance in serving for the college volleyball team. The results highlighted the significance of integrating mental skills, such as visualization and performance routine, to enhance serving accuracy and increase self-efficacy in athletes.

In 2004, Mamassis & Doganis conducted a study to investigate the effects of a Mental Training Program (MTP) that lasted for an entire season on the performance of two elite junior tennis players. The study comprised of five MTP volunteers who were subjected to five psychological skills: goal setting, positive thinking and self-talk, concentration and routines, rarousal regulation techniques, and imagery, alongside their regular tennis training. A separate group consisting of four elite junior tennis players got equivalent tennis training without undergoing any mental training. Overall, the MTP consisted of a group of nine elite junior tennis players, with an average age of 14.1 (SD=1.57), hailing from the northwest region of Greece. These players achieved excellent rankings both in their respective age group and in Greece. However, out of the total participants, only five individuals (consisting of one male and four females) were able to attend at least 80% of the MTP program and successfully completed all the necessary tasks, thereby becoming the MTP group. The remaining quartet of participants, consisting of two males and two females, did not participate in the mental training. The program's effectiveness was assessed using the Competitive State Anxiety Inventory-2 (CSAI-2), a tool that evaluates cognitive and physical anxiety as well as state confidence. Prior to their

first match, all participants successfully filled out the translated CSAI-2 questionnaire. In addition, participants evaluated eight aspects of their tennis play using a 5-point scale. The results indicated that the intervention group experienced an increase in somatic anxiety, cognitive anxiety, and self-confidence in the direction dimension during the posttest. Moreover, the intervention group experienced an enhancement in both self-confidence and overall tennis performance following the MTP. The study also presented findings for two individual cases, showcasing the applicability of the MTP in dealing with distinct performance issues. Overall, it was shown that all participants in the MTP group demonstrated improved tennis performance in the second competition. Conversely, the athletes in the non-MTP group did not demonstrate any improvement in performance during the posttest. This might be due to the greater significance of the second tournament and the expectation that positive self-evaluation would influence their coach's perception of their performance efficacy.

In 1996, Meyers et al. conducted a meta-analysis examining the impact of sport on American society, with a particular focus on its widespread influence. Their emphasis was on the extensive involvement of millions of Americans in diverse types of competition, training, and physical activity. The popularity and cultural significance of competition have solidified sport as a valid area of study in psychology. Within the cognitive behavioral framework, sport psychology and the improvement of athletic performance have experienced substantial development in the last twenty years. The behavior changes techniques frequently employed by cognitive behaviorists are essential components of almost all therapies designed to improve sports performance. These techniques include goal planning, mental imagery, relaxation exercises, stress management techniques, self-monitoring, self-instruction, cognitive restructuring, and modeling interventions. The review conducted by Meyers et al. integrated qualitative analysis with the meta-analysis by Whelan et al. (1989) to offer strong evidence for the efficacy of cognitive behavioral therapies in enhancing sport performance. The meta-analysis revealed a consistent effectiveness of these interventions by calculating the average impact size across several empirical studies. Furthermore, this efficacy remained consistent across

different treatment circumstances, control conditions, and types of dependent measures. The assessment further emphasized the necessity for more extensive study. It drew attention to problems with internal and external validity, especially how crucial it is to guarantee treatment integrity, agent training, the verification of intervention operation, and treatment reception confirmation. It was determined that the connection between the development of psychological skills and improvements in performance had not been thoroughly examined.

Patrick and Hrycaiko (1998) conducted a study with the objective of evaluating the effectiveness of mental skills training, namely in the areas of relaxation, imagery, self-talk, and goal setting, in enhancing running performance over a distance of 1,600 meters. The participants consisted of three male triathletes and one male top runner. The study utilized a single-subject multiple baselines across persons design to assess the effectiveness of the treatment package. The results indicated a significant improvement in running times, and a positive correlation was observed between the use of mental skills and running performance. The social validation findings were positive, indicating that participants derived satisfaction from implementing the mental training package and were content with the outcomes. In addition, coaches emphasized the significance of the findings, particularly for the elite track athlete.

Thelwell and Maynard (2003) constructed a mental skills training program tailored for cricketers, which emphasizes five unique mental skills for cricket: goal setting, activation regulation, self-talk, imagery, and concentration. The study sought to examine the effectiveness of a mental skills package in improving the consistency and performance levels of cricketers. Additionally, it aimed to investigate the influence of several performance measures on cricket performance. The study involved 16 semi-professional male cricketers who identified themselves as white-European. The participants had an average age of 20.9 years with a standard deviation of 2.4, and an average of 11.6 years of cricketing experience with a standard deviation of 2.5. The participants competed in an English Cricket Board (ECB) League for two full seasons, with an even distribution between batsmen and

bowlers. The procedure involved the assignment of 16 semi-professional cricketers into experimental and control groups through a process of matching. The cricket performance was evaluated both subjectively and objectively for a span of two seasons. Prior to the commencement of the second season, the experimental group was provided with an intervention package consisting of goal-setting, activation regulation, self-talk, mental imagery, and concentrate techniques. The first stage of data analysis consisted of group-level analysis. Subjective data was evaluated implementing a universal scoring system, while objective data was normalized according to Raglin's (1992) approach. By standardizing the measurements, it became possible to make a direct comparison between batters and bowlers in the following analysis. The raw data on runs scored were standardized for each of the two seasons for batters, and the number of wickets taken was standardized for each season for bowlers. The second stage of the study involved examining individual data for four people from the experimental group, comprising of two hitters and two bowlers. In addition, these participants also undertook semi-structured interviews. Each participant served as their own control, as the intervention was implemented after the initial season. This method made it possible to track how each person changed over time, something that a more conventional group design could have made difficult to see. The findings from the MANOVAs indicate that cricketers in the experimental group demonstrated increased performance consistency and subjective performance improvement. Nevertheless, objective measures solely indicated an increase in performance. Subsequent single-case analysis of data from four experimental participants confirmed the success of the intervention.

These studies demonstrate that psychological skills training has a substantial impact on enhancing athletic performance and overall well-being in a range of sports and life situations. However, they also reveal important areas for further research, such as the lasting influence of these improvements, the extent to which these abilities may be applied to different situations, the cognitive processes involved, and the long-term consequences of such interventions. The existing gaps in the literature offer significant opportunities for additional investigation in the subject of sports psychology.

2.2 Achievement Motivation and Sports

In their study, Can et al. (2010) examined the correlation between family, coach, club support, and drive for success in 138 highly skilled taekwondo players who took part in the Taekwondo Championship in Kayseri. The participants were selected randomly and took part in the study voluntarily. The researchers employed the Achievement Motivation and Support Scale in combination with six individual questions on the survey form. Data from the research study were processed and evaluated using a computer. Personal information was analyzed using frequency and percentage distribution tables. Pearson correlation analysis was employed to ascertain the association between success motivation and support perception. To examine the associations between demographic findings and athlete support, achievement, and motivation levels, Mann-Whitney U and Kruskal Wallis analyses were used. The findings demonstrated a significant correlation between success motivation and athlete support, with a statistical significance of 0.05.

In their study, Soyer et al. (2010) assessed the correlation between the motivation for success and team unity among a sample of 120 athletes, ranging in age from 13 to 34, from the cities of Kayseri and Mersin. The researchers employed the Willis Motivation of Success Unique to Sports scale and the Inventory of Team Unity, which was adapted for the Turkish community by Süleyman Moralı. The correlation study demonstrated a significant positive relationship, at a significance level of 0.05, between team unity and motivation for success. Nevertheless, there was no discernible correlation observed between age and achievement. Remarkably, a noteworthy inverse connection ($r = -0.192^*$) was seen between team unity and age, indicating that as athletes mature, team unity tends to weaken. The study revealed that factors such as motivation, success, and team unity have a favorable impact on sports performance. Differences between genders also emerged, with women demonstrating a higher motivation for success than males ($p < 0.01$) and a gender difference in team unity ($p < 0.05$).

The 2002 study conducted by Gould et al. sought to examine the psychological traits and their development in Olympic champions. The researchers

conducted comprehensive qualitative interviews with ten American Olympic winners who participated in a range of Olympic sports, such as skiing, wrestling, swimming, ice hockey, speed skating, and track and field. The combined total of Olympic medals earned by these champions is 32, with each athlete having an average of 2.4 Olympic games participated in. The athletes' ages spanned from 24 to 42 years, and their average duration of competing at the international level was 11.7 years. In order to accomplish their research goals, the study utilized structured interview guidelines to ensure consistency in the interviews conducted with athletes, coaches, and those related to the athletes such as parents, siblings, and significant others. Before each interview, the participants' psychological evaluations were reviewed by the interviewer, who conducted all of the interviews. The assessments contained measures of trait anxiety, multidimensional perfectionism, optimism, hope, task ego orientation, and coping abilities. The data analysis included conducting content analysis on the interviews, wherein trends were identified and responses were summarized for each participant. Regarding quantitative evaluations, In Gould et al.'s (2002) study, ten U.S. Olympic champions were found to have lower levels of anxiety according to the Sport Anxiety Scale. They also displayed high levels of optimism on the Life Orientation Test–Revised and moderately high levels of perfectionism on the Multidimensional Perfectionism Scale (MPS). The athletes preferred task orientation over ego orientation, as indicated by the Task Ego Orientation Scale Questionnaire. Additionally, they excelled in confidence, concentration, freedom from worry, and coachability, as measured by the Athletic Coping Skills Inventory–28 (ACSI–28). The champions scored significantly higher than professional minor league baseball players in coping skills. They also exhibited strong hope on the Adult Trait Hope Scale and demonstrated excellent performance strategies, particularly in competition contexts, as measured by the Test of Performance Strategies (TOPS). The Olympic champions had reduced anxiety, elevated optimism, moderate perfectionism, a propensity for task-oriented behavior, robust coping abilities, considerable hope, and exceptional performance methods in competitive situations. The researchers conducted interviews with athletes, coaches, and important others in order to comprehend the psychological traits that lead to sports achievement. Eight broad categories were found to encompass the

psychological traits of Olympic athletes in the study. These categories included general personality traits, performance-enhancing abilities, motivation and orientation, resilience under pressure, ability to overcome challenges, good moral and sportsmanship values, self-awareness, and a sense of balance between sport and life. Under these overarching categories, numerous higher-level themes and subthemes emerged, including "Emotionally guarded/Quiet," "Optimistic/Positive," "Mental toughness," "Sport confidence," and others. These attributes were perceived as factors that contributed to the accomplishment of Olympic athletes. The study also examined the factors that influence the development of these psychological traits. The influences were classified into six distinct categories: community, family, individual development, non-sport persons, sport environment personnel, and the sport process.

Halvari and Thomassen (1997) investigated the sources of athletes' competitive sports careers. The consisted of 150 Norwegian senior high school. Their research uncovered that the extent of professional success, which spans from regional to global, is notably impacted by a strong drive to succeed, enhanced by a strong inclination towards a sports-related future, and advanced by extensive sports involvement. On the other hand, a strong motivation to avoid failure hinders one's progress in their career. Ball-game athletes' careers were shown to be mostly driven by their motivation to achieve success, whereas players in individual-endurance sports were primarily influenced by their motivation to avoid failure. Furthermore, the study revealed that the impact of achievement motivation on athletes' careers is dependent upon the length of their competitive sports involvement and the level of their cultivated sports-oriented future outlook. Within the group of athletes participating in endurance and ball-game sports, these factors explained 45% and 29% of the differences in their sports careers, respectively.

In their study, Höner and Feichtinger (2016) analyzed the psychological attributes of 2677 U12 soccer players who were enrolled in the German talent development program. The researchers investigated the relationship between these attributes and the players' current and future performance. The study employed a

cross-sectional and prospective approach to assess psychological characteristics and capacities associated with motivation, volition, self-referential cognition, and emotion. The current examination encompassed the appraisal of motor skills and the subjective assessments offered by coaches. Conversely, the forthcoming assessment relied on the selection procedure for U16 youth academies affiliated with professional clubs. The findings demonstrated a significant correlation between self-referential thoughts and the motor score, whereas other psychological attributes were associated with the future accomplishments of the players. The study aimed to provide comprehensive insights into the importance of each trait for the success of young soccer players. It specifically focused on a homogeneous group of highly gifted players in the talent development program of the German Soccer Association. The study revealed a significant association between self-referential cognitions and present performance, and identified specific psychological characteristics that could forecast future achievement.

In their research, Sagar et al. (2010) aimed to examine several significant questions regarding the phenomenon of fear of failure among adolescent athletes, with a specific focus on the English football academies. Their primary goal was to determine the level of fear of failure among adolescent athletes, based on past research. Moreover, they examined the tactics utilized by these young athletes to manage failure, acknowledging the unique aspects of adolescent coping. Furthermore, their aim was to differentiate between coping mechanisms for the apprehension of failure and coping mechanisms for tangible failure. The study examined the situational features found in football academies that contribute to the fear of failure among adolescent players. The study examined the potential impact of the competitive and high-pressure setting on their performance and psychological welfare. The study comprised a sample of 81 male football players who were part of English football academies, including individuals who played as goalkeepers, defenders, midfielders, and attackers. The participants' age range was 16 to 18, and their average football experience was 10 years. They were dedicated members of their squads and had completed training in their respective academies for at least 6 months. The study consisted of two independent phases: the collection of

quantitative data and the compilation of qualitative data. The Performance Failure Appraisal Inventory (PFAI) was employed during the quantitative phase to evaluate the players' apprehension towards failure. This survey assessed various dimensions of the fear of failure, with the highest level of apprehension being linked to emotions of humiliation and embarrassment. The research indicated that the individuals displayed varying degrees of apprehension towards failure, ranging from low to moderate levels. During the qualitative phase, interviews with four players was conducted who demonstrated high levels of anxiety regarding failure, as evidenced by their PFAI ratings. The interviews yielded significant insights into the players' viewpoints on success and failure, their assessment of the consequences of success and failure, situational factors that contribute to their apprehension of failure, the influence of fear of failure on the players, and their tactics for managing fear of failure and failure. The players perceived failure as a deficiency in their performance, leading to bad outcomes in matches, as well as a loss of respect or recognition. Success was assessed positively by considering elements such as learning acknowledgment, satisfying others, improving their self-image, elevating social standing and engagement, and obtaining real benefits. In contrast, they assessed failure in an unfavorable way, leading to emotional repercussions, a decreased self-worth, decreased social involvement and reputation, harsh actions from others, an uncertain future, and disappointing loved ones. The fear of failure in this situation can be linked to several situational factors, including the internal and external expectations to succeed, poor performance during training sessions and competitions, the result of the match, and the opponent's reputation. The fear of failure had an impact on the players' subjective well-being, interpersonal behavior, and sporting performance. It led to negative feelings, decreased sleep quality, and lowered confidence in their abilities. Avoidance-oriented strategies were employed by players to manage their fear of failure, including the practice of mentally disconnection and avoiding discussions pertaining to their anxieties. Furthermore, they utilized emotion-focused strategies such as seeking emotional support from family members, as well as problem-focused approaches such as increasing effort and training. After facing a setback, the participants utilized problem-focused strategies, such as increasing their efforts and training, enhancing their motivation to showcase their

skills, gaining knowledge from their mistakes, and seeking practical help. Emotion-focused strategies involve seeking emotional support from others and reframing failure in a positive light. Avoidance-oriented strategies included the practice of cognitive disengagement and the avoidance of discussing the failure.

Zuber and Conzelmann (2014) conducted a longitudinal study in which data was collected over a period of seven months. At time t1, a comprehensive assessment was conducted on 160 skilled male football players from six regional squads in Switzerland to measure their achievement motivation and motor skills. Among the entire group of participants, 140 people, whose average age was 12.26, were assessed by at least one coach at t2. The analysis consisted of 122 individuals who also participated in t2. The accomplishment motive, comprising the desire for success (HS) and the fear of failure (FF), was evaluated employing the German version of the Achievement Motives Scale-Sport (AMS-Sport) with five-item components. The training volume was evaluated by a questionnaire that documented the total number of training hours dedicated to club activities, regional squad participation, and free play sessions. The evaluation of motor abilities was carried out through the implementation of seven tests, which were categorized into Football Technique and Fitness. Coaches evaluated sports performance using a visual scale that ranges from 0 to 100. The investigation employed structural equation models, and the adequacy of fit was evaluated using maximum likelihood estimation in AMOS 19. The study aimed to examine the relationship between accomplishment motives, motor abilities, training volume, and athletic performance. The analysis revealed a significant association between the Hope for Success (HS) component of the accomplishment motivator and athletic performance, explaining 6% of the variation. While factors like training amount and motor abilities did not have a substantial influence on this correlation, a model that considered both HS and motor abilities as crucial elements was found to be the most explanatory. This model explained 33% of the variability in athletic performance.

In 2006, Coetzee and his colleagues undertook a study with the aim of discovering certain sport psychology traits that distinguish successful soccer teams

from less successful ones. A study was conducted involving 36 soccer players from two prestigious colleges. The participants were requested to fill out four sport psychological questionnaires (CSAI-2, AMSSE, ACSI-28, and PSI), which evaluated a combined total of 21 sport psychological competencies. The results, derived from effect size analysis, indicated that the successful group had significantly greater scores in the psychological attribute of "striving for success" in comparison to the less successful group. Furthermore, the successful group also achieved much higher scores in the area of focus.

In 2003, Unierzyski conducted a study to investigate the impact of achievement motivation on the performance of young tennis players. The study investigated the influence of the neurophysiological characteristics of the nervous system on tennis performance. An examination was conducted on a group of 185 male teenagers, aged 11 to 14, who participated in activities organized by the Polish Tennis Association. The evaluation of achievement motivation was conducted using a questionnaire created by Widerszal-Bazyl (1978). This questionnaire included questions related to many factors such as aaspiration level, conformity, ability to delay gratification, self-confidence, temporal perspective, Zeigarnik effect, and mental stamina. The participants were divided into two factions: Group A comprised 11 persons who achieved worldwide tennis rankings (inside the top 800 on WTA/ATP) during the ages of 18 to 20. This occurred approximately 6 to 10 years after they had finished the questionnaire. Group B, which consisted of 174 individuals, consisted of players who did not receive international attention. The findings of the Student's t-test revealed that Junior players in Group A, who ultimately attained international status in tennis after 8 to 10 years, demonstrated significantly higher levels of achievement motivation in comparison to Group B, which comprised of players who did not reach international level.

In a study conducted by Singh (2015), the achievement motivation of female field hockey players was compared across various levels of competition. The study employed a survey-based methodology to ascertain the achievement motivation climate among female field hockey players. Female hockey players competing at the

intercollegiate and collegiate levels during the academic year 2014–2015 served as the purposive sample for this study. In particular, 50 female hockey players between the ages of 18 and 24 were selected for the research. Out of them, 25 players competed at the inter-university level, while the other 25 players competed at the inter-college level. The inter-college athletes were chosen from BBK DAV College in Amritsar and Layalpur Khalsa College for Women in Jalandhar. The evaluation of their levels of motivation for achievement was conducted with the Achievement Motivation Scale devised by Kamlesh (1990). The statistical analysis was performed using SPSS version 16.0 for Windows, developed by SPSS Inc, based in Chicago, IL, USA. The data was displayed using descriptive statistics, which included the mean and standard deviation. A two-sample independent t-test was employed to ascertain whether there was a statistically significant disparity in achievement motivation levels between female hockey players participating in inter-college and inter-university competitions. According to the analysis, the intercollegiate female hockey players' achievement motivation mean and standard deviation were 2.85 and 13.69, respectively. The average achievement motivation score for inter-university hockey players was 12.92, with a standard deviation of 2.41. The independent sample t-test results indicated that there was no statistically significant disparity in achievement motivation across female hockey players from different colleges and universities.

In their study, Dureha et al. (2010) examined and compared the psychological factors of both national and international hockey players. A total of sixty male hockey players from India were grouped into two groups: national (n=30) and international (n=30). The individuals' age spanned from 17 to 25 years. The data collection relied on four test-batteries, namely the Alberta Incentive Motivation Inventory, the Sports Achievement Motivation Test, the State and Trait Anxiety Inventory, and the Sports Competition Anxiety Test. The study revealed that there were no significant differences in incentive motivation, achievement motivation, state anxiety, and trait anxiety between national and international hockey players. However, a significant difference was discovered in sports competition anxiety. The statistical analysis employed a t-test with a significance threshold of 0.05. The idea

that there would be no difference between international and national players in terms of achievement motivation was accepted. However, this hypothesis was refuted when it came to achievement motivation in relation to state, trait, and sports competition anxiety.

In their study, Vasanth et al. (2016) examined the degrees of achievement motivation in college students who participate in sports and those who do not. They also investigated how these motivation levels influence their propensity for taking risks. The study had a cohort of 100 students from a prestigious college, with 50% actively participating in sports and the remaining 50% not involved in any sports activities. The researchers employed a range of instruments, such as socio-demographic data sheets and assessments such as Ray's Achievement Motivation Scale and Domain-Specific Risk-Taking Scale. The findings indicated that there was no statistically significant difference in achievement motivation between the students engaged in athletics and those who were not. Moreover, a gender-based research uncovered certain differences in risk-taking behavior. The study found a negative relationship between achievement motivation and general tendency for taking risks. Furthermore, it identified correlations among many aspects of risk-taking behavior.

In their study, Shinde and Dhame (2018) investigated the correlation between personality traits and achievement motivation in Kabaddi athletes. The study included a total of 70 Kabaddi players, ranging in age from 18 to 24 years. These players were picked from different colleges in Baramati and Malshiras Tahsil. The study employed a correlational research design, and data were gathered with the consent of college and sports department authorities, guaranteeing confidentiality. Three standardized psychological assessments were utilized: the Sports Specific Personality Test (2010) assessing seven personality traits, the Achievement Motivation Test (ACMT), and a personal data sheet. The findings demonstrated a strong and statistically significant association between six personality variables (Sociability, Dominance, Self-Concept, Conventionality, Mental Toughness, and Emotional Stability) and the achievement motivation of the Kabaddi players. Although there was a positive association, the relationship between Extraversion and

the variable was not statistically significant. This finding supports the hypothesis that there is a connection between personality factors and achievement motivation in Kabaddi athletes.

Malik (2022) studied female Kabaddi players who competed in state and inter-university championships in Haryana in order to ascertain their level of drive for sports performance. The study aimed to assess and compare the levels of sports achievement motivation among the players. The hypothesis evaluated whether there was a significant difference in achievement motivation levels between the two groups. The study employed a purposive survey methodology, specifically targeting female Kabaddi players from Haryana who have competed in either inter-university or state-level championships. The sample consisted of 250 female Kabaddi players who satisfied the requirement of having taken part in these championships. The Sports Achievement Motivation Test, created by Kamlesh, was used to evaluate the degree of motivation for sports achievement. Data analysis involved the application of statistical techniques such as mean, standard deviation, and 't' tests. The findings indicated a significant difference in the degree of sports achievement motivation among female Kabaddi players who took part in inter-university and state-level competitions. More specifically, athletes who competed in state-level championships showed greater drive for sports performance than athletes who competed in inter-university championships.

These studies provide significant contributions to the understanding of achievement motivation in sports by highlighting its relationships with a variety of psychological factors and its impact on performance in diverse sports settings. Through the analysis of the interaction between achievement motivation and psychological traits, they contribute to a deeper understanding of the dynamics that drive athlete performance and success.

2.3 Self-Efficacy and Sports Performance:

2.3a Review of studies on Self-Efficacy and sports performance.

In a study titled "The Role of Self-efficacy on Performance of Football Players' Sports Skills," Sivrikaya (2018) did a descriptive (correlational) research. The objective of the study was to investigate the correlation between self-efficacy and the performance of football players. The data was analyzed using regression correlation analysis as the inferential statistical method. The study had a group of 52 male students from Ataturk University who voluntarily participated in the study in 2018. Using the Morgan table, the participants were selected at random from a total population of sixty individuals. The data obtained from the participants were examined using parametric tests, specifically regression analysis. The computations and hypothesis testing were conducted using SPSS software (version 20). The study findings demonstrated a statistically significant and positive impact of self-efficacy on the performance of professional football players in Erzurum. The regression correlation study revealed a positive relationship between higher levels of self-efficacy and improved performance in sports skills among the football players. The results revealed a positive correlation between the enhancement of self-efficacy ratings and the improvement in the performance of the football players. This implies that players were more likely to perform better in a variety of football-related domains, including technical skills, tactical decision-making, physical agility, and overall game performance, if they had a strong belief in their own abilities and skills.

In their study, Ibrahim and Almoslim (2016) conducted a comparison of the impact of state anxiety and self-efficacy on performance levels in track and field athletes, specifically differentiating between poor and high performers. The study population consists of 250 male athletes at the university level who took part in the Saudi Interuniversity Track and Field Meet in the 2012-2013 academic year. The psychological factors being studied included cognitive anxiety, somatic anxiety, self-confidence, and self-efficacy. When it came to cognitive anxiety, self-efficacy, and confidence, high-performing track athletes showed much greater levels than their low-performing counterparts. Nevertheless, there was no significant difference in

somatic anxiety observed across these groups. No significant differences were seen in cognitive anxiety, somatic anxiety, self-confidence, or self-efficacy between high and low performers in the field category. Upon comparing elite achievers in the track and field disciplines, there were no significant differences observed in cognitive anxiety, physical anxiety, or self-confidence. Nevertheless, high-performing individuals in the track displayed significantly higher levels of self-efficacy compared to high-performing individuals in the field, suggesting a better sense of confidence in their own talents. In contrast, when comparing individuals who performed poorly in track and field events, it was found that those who performed poorly in field events had significantly higher levels of cognitive anxiety and self-confidence compared to their counterparts in track events. Field low performers exhibited much higher levels of self-efficacy. The results offer valuable insights into the variations of psychological characteristics among track and field athletes across different levels of performance.

The study conducted by Singh and Bhardwaj in 2009. The researchers investigated the impact of self-efficacy on the athletic performance. The study encompassed a sample of 200 adolescent athletes, both male and female, ranging in age from 13 to 19. These athletes were selected from schools located in the state of Punjab and Chandigarh. The sports they participated in were Cricket, Kho-kho, Volleyball, Softball, and Athletics. The study employed a standardized questionnaire on self-efficacy devised by Bandura (1977), with 22 items. The questionnaire was developed to evaluate self-efficacy across multiple domains, encompassing perceived physical competence, confidence in physical self-representation, and overall self-efficacy. The self-efficacy ratings of national-level athletes were greater than those of district-level athletes in all categories. Male athletes regularly demonstrated higher levels of self-efficacy compared to their female counterparts. Regarding Perceived Physical Ability (Self-Efficacy), national-level athletes shown notably more self-efficacy compared to district-level athletes. Additionally, male athletes displayed higher levels of self-efficacy than their female counterparts. The study found that national-level athletes shown considerably more self-efficacy in physical self-presentation compared to district-level athletes. Additionally, male athletes exhibited

higher levels of self-efficacy than their female counterparts. The study also employed a 2x2 ANOVA to examine the impact of performance level and gender on these self-efficacy factors. The findings demonstrated that both the performance level and gender exerted a substantial influence on the self-efficacy of the athletes.

In a study conducted by Nwankwo and Onyishi (2012), the researchers investigated the influence of self-efficacy, gender, and athlete category on the ability to manage sports-related stress among 236 athletes from secondary schools in Enugu, South-east, Nigeria. The study comprised participants ranging in age from 10 to 20 years, with an average age of 15.46 years. The results, obtained by a three-way analysis of variance (ANOVA), clearly showed that self-efficacy had a substantial and influential role in managing and dealing with stress related to sports. Athletes who had higher levels of self-efficacy reported using more effective coping methods in comparison to those with lower self-efficacy. In addition, female athletes demonstrated a higher utilization of adaptive coping mechanisms in comparison to their male counterparts. The distinction between senior and junior athletes did not have a substantial effect on the participants' coping mechanisms in response to stress experienced during sports activities. Interestingly, self-efficacy and gender had significant interaction effect on coping with stress related to sports.

The study conducted by Đurović et al. (2021) included a convenient sample of 76 active athletes, with 70% being male. These athletes participated in team sports, with the majority (71%) being involved in handball, followed by football (18%) and water polo (11%). The study was conducted within sports clubs, where participants completed annual self-assessments of their sports performance using a questionnaire specifically tailored for the research. The survey included six topics assessed using a 7-point Likert scale, where participants rated their sports performance (e.g., "I get great results"). In order to investigate the relationship between anxiety, self-efficacy, and sports achievement, the researchers employed various tools, such as the Competitive State Anxiety Inventory, General Self-Efficacy Scale, and a custom-made questionnaire on sports achievement. The findings demonstrated a significant inverse relationship between Cognitive anxiety, a

component of competitive anxiety, and sports achievement ($r = -.38$, $p < .01$). This suggests that elevated levels of Cognitive anxiety are linked to diminished sports performance. Nevertheless, no significant correlation was observed between somatic anxiety and athletic achievements. Conversely, a significant positive relationship was found between General Self-Efficacy and sports achievement ($r = .51$, $p < .01$), indicating that higher levels of self-efficacy were linked to improved sports performance. The results of the regression analysis indicated that both General Self-Efficacy ($\beta = .39$, $p < .01$) and Cognitive anxiety ($\beta = -.24$, $p < .05$) were shown to be statistically significant predictors of sports achievement. Moreover, additional bootstrapping analyses were performed to assess the potential mediating influence of General Self-Efficacy on the association between Cognitive anxiety and sports achievement. The findings revealed a significant indirect impact of Cognitive anxiety on achievement through General Self-Efficacy ($b = -.30$, CI [-.73, -.07]). This suggests that Cognitive anxiety indirectly restricts sports achievement by reducing self-efficacy. On the other hand, when examining Cognitive anxiety as a mediator, the mediation was found to be insignificant. This suggests that high anxiety directly inhibits sports achievement by negatively affecting self-efficacy.

Lowther et al. (2002) conducted a study to examine the relationships between psychological skills, self-efficacy, and performance in a sample of 15 male soccer players (aged 19-28) who represented the England squad in the 2000 Amputee World Cup. The average soccer experience of these players was 11 years, with an average of 2.4 years of international experience. The study applied a range of measures, such as the Test of Performance Strategies (TOPS) to examine psychological skills, individual goal-based self-efficacy assessments, and self-assessed performance evaluations. The self-efficacy scores exhibited consistent stability across all six games, with no significant variations. In the psychological skills domain, the participants' results indicated that they obtained higher scores on competition-related factors as opposed to training-related factors. A game-by-game analysis of the relation between performance and self-efficacy showed moderate correlations for the majority of games, indicating a positive relationship between successful performance and self-efficacy. Additional examination of the relationships among psychological

abilities, self-efficacy, and performance revealed that competition activation, relaxation, automaticity, imagery, and training relaxation exhibited different levels of correlation with self-efficacy and performance. Significantly, the usage of particular psychological skills was linked to increased self-efficacy and enhanced performance.

In their 2014 study, Zagórska and Guszkowska aimed to assess the efficacy of a proprietary self-efficacy-building program for track and field athletes. The program sought to accomplish this by offering vicarious experiences and fostering effective regulation of arousal. The researchers also attempted to explore shifts in cognitive aspects linked to self-efficacy, such as dispositional optimism, hope for success, and locus of control. The study employed an experimental two-group design, incorporating pre-test and post-test assessments. The participants consisted of a total of forty-two athletes, comprising 29 women and 13 men, aged between 17 and 24 years. The participants were assigned to either the intervention group or the control group in a random manner. Multiple measurement tools were employed, such as the General Scale of Self-Efficacy, Hope for Success Questionnaire, Life Orientation Test Revised, and Internal-External Locus of Control Scale. The study's findings demonstrated the efficacy of the program. The intervention group participants demonstrated a significant increase in self-efficacy ($P = 0.001$), whereas the control group did not produce a similar improvement ($P = 0.732$). Furthermore, upon finishing the program, athletes in the intervention group had significantly higher levels of self-efficacy ($P = 0.001$) and optimism ($P = 0.017$). The participants in the experimental group exhibited a higher level of internal locus of control in comparison to the control group ($P = 0.001$). Nevertheless, the athletes in the intervention group exhibited a significant decline in both the pathways ($P = 0.001$) and agency ($P = 0.001$) aspects of hope for success.

2.3b Analysis of the impact of mental related training on athletes' Self-Efficacy beliefs.

In their study, Walter et al. (2019) investigated the impact of self-talk training on competitive anxiety, self-efficacy, volitional skills, and performance. The study consisted of a group of 117 participants, ranging in age from 13 to 23 years (mean =

16.0, standard deviation = 1.8), consisting of 55 females and 62 males. A total of 72 participants were recruited from individual sports, including canoe racing, gymnastics, swimming, and wrestling. Additionally, 45 participants were recruited from team sports, such as ice hockey, handball, and volleyball (Table 1). The participants consisted of students enrolled in sports schools or players affiliated with sports clubs from three distinct cities. The inclusion criteria consisted of being a minimum of 12 years old and actively engaging in competitive sports as a means to represent juvenile sub-elite athletes, a demographic that is frequently overlooked in studies. The research questionnaires were distributed during regular training sessions, under the supervision of one of the authors, and carried out without the presence of coaches. Afterwards, the individuals were assigned randomly to either the control group or one of the experimental groups. The experimental group in the short-term study had a self-talk intervention for a duration of one week, which involved three sessions of 60 minutes each. The experimental group engaged in a self-talk training program for a duration of eight weeks, consisting of three 20-minute sessions per week. The coaches were uninformed about the group allocations in order to avoid any potential impact on the athletes' conduct. Upon finishing the intervention program, all participants in both the intervention groups and the control group proceeded to complete the dependent measures at Time 2. The control group was split into two equal parts, with one part being tested after one week and the other part after eight weeks. In order to evaluate any lasting effects of the treatments, a third data evaluation (Time 3) was carried out around five to six weeks later, taking into account the athletes' schedules. The participants in the control group were tested at the same time as the participants in the experimental groups. The Statistical Package for the Social Sciences (SPSS) version 24 was implemented for conducting the statistical analysis. The study employed univariate analyses of variance and chi-square tests to investigate potential sociodemographic and sports-related differences among the three groups (short-term intervention, long-term intervention, and control group). The analysis showed noteworthy interaction effects of Time × Group on self-efficacy and performance ratings. The group receiving the long-term intervention (LTI) demonstrated significant improvements in self-efficacy and performance in comparison to both the short-term intervention (STI) group and the control group.

The intervention led to significant decreases in somatic state anxiety and significant increases in state self-confidence, self-optimization, self-efficacy, and performance among the participants. Significant interaction effects were seen between state anxiety and volitional skills. Both intervention groups exhibited a reduction in somatic state anxiety, whereas the control group demonstrated a small increase. The LTI group saw a gain in self-confidence, whereas the control group also surprisingly experienced an increase. With the exception of self-optimization, which showed an increase in the LTI group, there were no significant changes in volitional skills over time.

In a study conducted by Garvin (2014), the objective was to investigate the impact of a psychological skills training (PST) program on the swimming performance of adolescent swimmers at a high level. The study employed a random assignment method and included a waitlist control condition, with a total of 76 participants. The intervention lasted for a duration of 8 weeks and had a specific focus on instructing elite high school swimmers, who were members of a club-level swim team, in various methods such as goal-setting, self-talk, attention, visualization, confidence, and arousal management. The desired goals were enhancements in performance, as evaluated by standardized assessments of swim times and Power Point scores, together with individual perceptions of achievement. In addition, the study examined how self-efficacy and the application of psychological strategies influenced the effectiveness of the PST program. The findings refuted the original hypothesis that the experimental group would exhibit greater improvements in performance compared to the control group. Significant correlations were found between the intervention and the application of psychological strategies ($t(74) = 4.64$, $p < .0001$), as well as self-confidence ($t(74) = 3.27$, $p < .0005$). The intervention group demonstrated substantial and statistically significant improvements in both strategy use and self-efficacy over the course of the trial, in contrast to the control group. These findings enrich current research by illustrating the immediate influence of a PST intervention on the application of psychological strategies and self-efficacy.

In a study conducted by Villani and colleagues (2017), the researchers evaluated the efficacy of an innovative blended training program that integrated face-to-face and web-based activities in improving the self-efficacy and ability to manage emotions in young basketball players. The training program lasted for a period of seven weeks and was based on Bandura's four sources of self-efficacy information. In a two-group pre-test and post-test design, a total of 37 basketball players were randomly assigned to either the web-based interactive training group or a control group that received text-based training. The findings indicated that the athletes who participated in the web-based interactive training experienced higher levels of self-efficacy compared to their first evaluation, however no significant differences were identified in the control group. Both groups revealed a decrease in emotional suppression at the completion of the training, without any significant differences in cognitive reappraisal. Nevertheless, cognitive reappraisal demonstrated a significant correlation with self-efficacy, both prior to and during the intervention. The findings indicate that blended training programs have the potential to improve self-efficacy in sports.

A study done by Feltz and Riessinger (1990) aimed to investigate the usefulness of in vivo emotive imagery and performance feedback in enhancing self-efficacy beliefs and performance in a competitive muscular endurance test. The study included a total of 120 participants, consisting of 60 male and 60 female college students. These participants were randomly distributed to one of three experimental conditions: mastery imagery mixed with feedback, feedback alone, or a control group. In the imagery-plus-feedback condition, participants were instructed that one individual in each pair (always the subject) would engage in imagery exposure, while the other individual (always the confederate) would remain outside. Throughout the trials against the confederate, the confederate consistently emerged winner with a continuous lead of 10 seconds. The findings demonstrated a notable rise in self-efficacy among the participants in the imaging group during a short period of exposure, as evidenced by a significant interaction between the group and the number of trials. In addition, participants in the imagery group consistently reported significantly higher levels of self-efficacy scores compared to those in the feedback-

alone and control groups after each performance session. In terms of performance, there was a substantial difference in the time it took for subjects in the imagery group compared to subjects in the feedback-alone or control group. The imagery group had lengthier performance durations initially. Importantly, providing performance feedback alone did not have a substantial effect on either self-efficacy beliefs or performance outcomes.

Together, these studies explore the intricate relationship between self-efficacy and sports performance in several athletic fields. A consistent pattern emerges, indicating that stronger self-efficacy is linked to improved performance in a range of sports, including football, track & field, and others. Moreover, these investigations highlight the impact of variables such as gender and athlete category on self-efficacy, providing insight into differences in self-efficacy among athletes. Significantly, interventions such as self-talk training and blended programs have shown their capacity to enhance self-efficacy and hence improve performance. These studies have demonstrated the efficacy of interventions, such as self-talk training and integrated programs, in strengthening athletes' self-efficacy and thereby improving their performance. Nevertheless, there is a noticeable lack of research in the existing literature regarding the requirement for more comprehensive investigation into the precise strategies and training techniques that might successfully overcome this gap in self-efficacy, thereby enhancing and improving athletic performance. These findings offer valuable insights into the critical significance of self-efficacy in sports and have practical implications for enhancing athletes' psychological preparedness and competence on the field.

2.4 Self-Regulation and Sports Performance:

2.4a Review of studies on Self-Regulation and sports performance.

Toering et al. (2009) did a study to investigate the correlation between self-regulation and performance level in young soccer players. The sample comprised 444 male soccer players, aged between 11 and 17 years, with a mean age of 14.4 years. The participants were categorized into two groups: elite (n=159) and non-elite

(n=285). The classification was based on their affiliation with professional soccer clubs that compete at the highest national level in the Netherlands, or with clubs participating in regional competitions at lower divisions, respectively. The study employed a questionnaire to evaluate different facets of self-regulation, such as planning, self-monitoring, evaluation, reflection, effort, and self-efficacy. A logistic regression analysis was performed, while controlling for age, to investigate the relationship between self-regulatory characteristics and players' performance level. The findings demonstrated a positive correlation between higher scores on reflection and effort and a higher level of performance. Elite players routinely outperformed non-elite players in all facets of self-regulation. More precisely, individuals who achieved high scores in reflection demonstrated a significantly higher probability of being part of the elite category. Among elite players, 49.7% scored highly in reflection, whereas only 22.5% of non-elite players achieved the same level. Likewise, individuals who achieved high scores in effort demonstrated a markedly greater likelihood of belonging to the elite category. Specifically, 49.1% of elite players attained high scores in effort, in contrast to only 18.5% of non-elite players. These findings indicate that exceptional players possess a heightened perception of their own strengths and shortcomings and are more skilled at effectively implementing this perception into action. Moreover, elite players demonstrated higher inclination to dedicate effort towards both practice and competition. The presence of highly developed self-regulatory skills in elite players may result in a more efficient learning environment and ultimately lead to superior performance compared to non-elite players.

Jonker et al. (2010) undertook a study to investigate the impact of self-regulatory skills on the academic and sport achievements of elite child athletes between the ages of 12 and 16. The researchers conducted a comparative analysis of the performance of these athletes with age-matched individuals in two types of academic secondary school systems: pre-university and pre-vocational. A total of 338 individuals took part in the study, with 160 being male and 178 being female. The age range of the participants was between 12 and 16 years. Out of the total participants, 170 individuals were identified as elite youth athletes (77 males and 93

females). This classification was based on their participation in a talent development program in the Netherlands, which indicated that they were in the top 2.5% of athletes in their age group. Roughly 50% of the elite athletes engaged in team sports, whereas the remaining 50% were involved in individual sports. The elite athletes have an average of 4000 hours of cumulative athletic experience, which is equal to roughly 560 hours of training per year. Furthermore, a significant majority of 78.8% of the athletes belonged to the pre-university system, and the remaining 21.2% were enrolled in the pre-vocational system. Conversely, 168 individuals (83 males and 85 females) were classified as non-athletes due to their self-reported activities, suggesting their lack of present involvement in sports and a maximum of four years of previous sport experience. Of the individuals who were not athletes, 47.6% belonged to the pre-university system, while 52.4% were part of the pre-vocational system. In this study, a specifically constructed questionnaire was used to collect demographic data about the participants and evaluate their engagement in sports and self-regulatory abilities. The survey comprised of basic inquiries, such as the individual's date of birth, gender, and the 4-digit postal code of their place of residence. The zip codes of the participants were cross-referenced with a list issued by the Dutch Ministry of Housing, Spatial Planning and the Environment, which delineated neighbourhoods characterized by low socioeconomic status (SES). Since it was thought that people with middle or high SES would have equal chances to participate in sports and similar academic situations, SES was employed as a dichotomous variable to discriminate between low SES and middle/high SES. Participants were questioned regarding their engagement in sports, that includes the particular sports they engaged in, the duration of time devoted to training and games, the duration of years they had been actively involved in sports, and whether they had ever repeated a whole academic year. Data regarding the enrolment of participants in the pre-university or pre-vocational system was acquired from the databases of the schools. The study employed subscales from multiple pre-existing questionnaires to evaluate self-regulation. The subscales were translated from their original English forms to Dutch using standard translation techniques. The translations underwent a thorough examination and were subsequently adjusted, taking into account input from both translators and a specialist in the field of Human Movement Sciences. To

verify the clarity and applicability of the questionnaire for the specified age group, a pilot test was conducted on a group of 48 children between the ages of 11 and 14. The study analyzed many components of self-regulation, such as planning, self-monitoring, effort, self-efficacy, evaluation, and reflection. The subscales employed to assess these dimensions were derived from prior investigations undertaken by Hong and O'Neil Jr. (2001), Herl et al. (1999), Howard et al. (2000), and Peltier et al. (2006). The evaluation component of metacognitive self-regulation was assessed using the Inventory of Metacognitive Self-Regulation (IMSR) subscale established by Howard et al. (2000), while reflection was measured using the Reflective Learning Continuum (RLC) produced by Peltier et al. (2006). To investigate the variations in self-regulation according to academic system, competitive level, and the connection between the two, statistical analyses were carried out. The researchers also took into account covariates such as age, repeating a year of study, gender and socioeconomic position The research unveiled intriguing results. Pre-university individuals who are not involved in athletics displayed superior performance compared to pre-vocational individuals who are not involved in athletics in several self-regulatory abilities, such as self-monitoring, appraisal, reflection, effort, and self-efficacy. Conversely, pre-university elite youth athletes outperformed non-athletes in terms of planning, reflection, and effort. However, there were no significant differences in self-monitoring, appraisal, and self-efficacy. Pre-vocational elite youth athletes demonstrated superior performance in self-monitoring, reflection, and effort compared to pre-vocational non-athletes while evaluating the academic system at a competitive level. Nevertheless, there were no significant differences observed in the domains of planning, appraisal, and self-efficacy. In addition, pre-university elite youth athletes had superior performance in planning and self-efficacy as compared to pre-vocational elite youth athletes. However, no significant differences were observed in self-monitoring, evaluation, reflection, and effort.

In their study, Kumar et al. (2023) analyzed and compared distinct self-regulation factors between individuals involved in sports and those who are not. The study had two distinct groups: an experimental group comprising those engaged in sports, and a control group comprising individuals who abstain from sports

participation. One hundred volunteers were randomly selected, all aged between 18 and 25 years. The study employed the Self-Regulation Questionnaire (SRQ; Brown, 1999) to evaluate self-regulation. To examine the relationship between self-regulation and psychological well-being, the researcher employed descriptive statistics and conducted a paired group t-test using the IBM SPSS® data analysis program. The findings indicated that there was no statistically significant difference in the chosen psychological measure, specifically self-regulation, between the two groups, namely athletes and non-athletes.

In a study conducted by Gupta & Sudhesh (2019), the objective was to examine the impact of Grit and Self-Regulation on the resilience of college football players. The participant sample consisted of 32 individuals, comprising both male and female college football players who represented their respective colleges in competitive sports. The participants were deliberately chosen from the age range of 18-24 years. This pilot study employed a quantitative research design with the primary aim of evaluating the influence of the independent variables, Grit and Self-Regulation, on the dependent variable, Resilience. Three distinct instruments were used in this study: the BU Resilience Scale (Anna Lakshmi, 2009), the Grit Scale (Duckworth et al., 2007), and the Self-Regulation Questionnaire (Brown, Miller & Lawendowski, 1999). The data was analyzed using IBM's Statistical Package for Social Sciences (SPSS) version 21. The data was analyzed using descriptive statistics, and the normality of the data was assessed using the Shapiro-Wilk normality test. Parametric statistical analysis was used after this analysis. The study employed the independent sample t-test to investigate gender differences. Additionally, Pearson's correlation and stepwise regression analysis were utilized to ascertain the predictive ability of Grit and Self-Regulation on Resilience levels. The correlation study yielded findings indicating a positive relationship among Grit, Self-Regulation, and Resilience. Furthermore, Self-Regulation was found to be a predictor of Resilience in college football players.

In their study, Steiner et al. (2010) investigated the interaction between emotional activation and self-regulation in elite collegiate athletes. The study

included 461 collegiate athletes and 61 non-athletes from Stanford University who were matched in terms of age and gender. The Weinberger Adjustment Inventory was used to evaluate social-emotional adjustment and personality. The findings revealed significant differences between individuals who engage in athletic activities and those who do not. The athletes exhibited reduced distress, increased self-restraint, repressive defensiveness, and denial of distress. The logistic regression models evaluated the significant predictors of an individual's athlete status. The most significant indicators of athletic status were age, denial of distress, and responsibility.

Anshel and Porter (1996) conducted a study to assess the differences in specific psychological traits and behavioral tendencies among competitive swimmers, taking into account their proficiency level and gender. The aim of the study was to examine the psychological characteristics and behaviors of competitive swimmers, specifically in relation to their skill level and gender. The study employed Kirschenbaum and Wittrock's (1984) self-regulation (SR) model as the theoretical framework. The study had a sample of 79 Australian male swimmers and 67 Australian female swimmers who were at the top level. The participants had an average age of 20.4 years and were competing at the national level. In addition, a group of non-elite male swimmers (n = 57) and non-elite female swimmers (n = 67), with an average age of 17.6 years, who were engaged in swimming at the state and local levels, were included in the study. The logistic regression model, employed for predicting the probability of being an exceptional swimmer, indicated that out of the 100 survey items, 15, together with three gender-related interaction terms, were the most significant determinants. The findings showed that before and during competitions, elite swimmers exhibited more self-regulatory thoughts and behaviors than their non-elite peers. Specifically, males showed a higher inclination than females to devote leisure time towards strengthening their swimming skills and were more prone to increasing their training efforts after experiencing a low performance. Nevertheless, it is important to acknowledge that, particularly among highly skilled swimmers, there were more similarities than differences between male and female participants. The study's results and their implications for implementing self-

regulation methods in competitive swimming are examined within the context of the SR model.

In a study conducted by Kitsantas & Zimmerman (2002), a group of 30 female participants from a prominent institution in the southeastern region were involved. The participants willingly took part in the study after obtaining approval from the university's human subjects committee and providing informed consent. The individuals were classified into three distinct categories: Experts, Non-Experts, and Novices. The group of experts consisted of 10 players who were part of the university's varsity volleyball team. The non-experts were ten players from the university's volleyball club who had a minimum of three years of experience. The novices were individuals who had no prior experience in organized volleyball. The study offered an adequate sample size to achieve statistical power, considering its sensitivity to microanalytic metrics. The majority of participants were of European heritage, accounting for 73% of the total. African Americans comprised 10% of the participants, while Asians made up 17%. The experts possessed an average of 7.75 years of playing experience, while the non-experts had an average of 6.80 years. On the other hand, novices had no prior experience in playing. The study employed a range of statistical techniques, such as ANOVA, MANOVA, discriminant function analyses, univariate ANOVAs, and chi-square tests, to investigate the serving skill and self-regulation of Expert, Non-Expert, and Novice volleyball players. The study evaluated the participants' understanding of overhand volleyball serving, training routines, and self-regulation strategies. Additionally, it analyzed their serving skills and different self-regulation measures, such as self-efficacy, self-satisfaction, perceived instrumentality and intrinsic interest. The study revealed significant differences among the three groups of experts in terms of their proficiency in serving, self-regulation measures, and a range of self-regulation techniques such as goal setting, planning, strategy implementation, self-monitoring, self-evaluation, attributions, and adaptation. An integrated examination of the self-regulation measures demonstrated a considerable and reliable prediction of volleyball serving skill, as indicated by a high level of internal consistency (Cronbach's alpha = 0.90)

and a strong correlation (r = 0.95) between self-regulation and serving skills. The combined self-regulation score had a mean of 0.59 and a standard deviation of 0.42.

Cleary and Zimmerman (2001) conducted a study to examine self-regulation in basketball players during free-throw shooting practice. The focus was on differentiating between experts, non-experts, and beginners. The researchers employed multiple scales, such as self-efficacy, self-satisfaction, and goal setting assessments, and employed statistical analyses, such as a single component analysis of variance (ANOVA), to evaluate differences in shooting proficiency among the three groups. In addition, a MANOVA was conducted to summarize the changes in self-efficacy and self-satisfaction. This was followed by univariate F-tests to examine particular differences. The study revealed that professionals had exceptional skill in shooting, exhibited elevated levels of self-efficacy, associated their misses to specific strategies, and employed specific technique strategies. In contrary, individuals without expertise ascribed failures to a lack of regular training. Achievement and self-efficacy were found to be correlated with strategy selection and goal setting. This study highlights the importance of self-regulation in the practice of sports and the development of skills. The technique consisted of individual practice sessions that included systematic data collection and queries to evaluate various aspects of self-regulation and performance.

2.4b Analysis of the impact of mental related training on athletes' Self-Regulation.

In a study conducted by McCrory (2013), the objective was to examine if multi-modal psychological skills training (PST) could enhance self-regulation behavior, self-efficacy, and the utilization of psychological skills in military pilot-trainees who were facing learning challenges connected to their course. Results indicated a linear rise in a particular self-regulation behavior from the pre- to post-intervention period. Similarly, there were significant increases in self-efficacy and application of psychological skills, accompanied by simultaneous decreases in anxiety and worry. At the two-month follow-up, most changes had been maintained. The potential of altering pilot-trainee cognitive and behavioral methods in order to enhance learning, improve individual and cohort responsiveness, and achieve cost

effectiveness in training offering is emphasized by PST. The study utilized various diagnostic methodologies, one of which was the "Style of Behavior Self-Regulation" methodology developed by V.I. Morosanov. In addition, a questionnaire survey was carried out to evaluate the levels of self-regulation in the emotional domain, activity, and behavior, utilizing the questionnaire developed by G.S. Nikiforov, V.K. Vasil'ev, and S.V. Firsova. A questionnaire devised by the author was used to assess individuals' awareness of approaches and procedures for self-regulating their mental state. Analyses were conducted using mathematical data processing techniques.

In 2014, Maydokina and Kudashkina conducted a study aimed at creating and evaluating psychological and educational tools to enhance an athlete's ability to regulate their own behavior. The study included junior athletes participating in track and field sports and single combat, with a total of 155 people in the sample. The diagnostic methodologies employed in the present study were as follows: The modified version of the "Style of behavior self-regulation" methodology (V.I. Morosanov); a questionnaire survey assessing the level of self-regulation in the emotional, activity, and behavioral domains (G.S. Nikiforov, V.K. Vasil'ev, S.V. Firsova); the author's questionnaire on "Awareness of methods and techniques for self-regulating mental state"; mathematical data analysis methods. A study was conducted at the Regional Research and Practical Center of Physical Culture and Healthy Lifestyle, which is part of the Mordovian Base Center of Pedagogical Education of MordSPI. The study aimed to assess the level of self-regulation development in junior athletes participating in track and field athletics and single combat. The research consisted of three pivotal steps. Initially, during the assessment phase, the levels of self-regulation and self-control in the emotional, cognitive, and behavioral domains were measured. Additionally, the participants' understanding of strategies and methods for self-regulating their mental state was evaluated. The findings revealed a significant proportion (70%) of individuals with inadequate levels of self-regulation and self-control, particularly in managing their emotional state, activities, and behavior. Nonetheless, they demonstrated a desire to acquire and become skilled in useful self-regulation strategies. During the subsequent stage, an intervention known as "Mental Self-Regulation in Sport" was devised and executed

within the experimental group. This program sought to increase understanding of mental self-regulation, strengthen self-regulation abilities, and boost the capacity to identify and regulate negative mental states during sports activities. During the control stage analysis, significant increases in self-regulation levels were observed among the athletes in the experimental group, specifically among track and field athletes and warriors. The study revealed that a majority of the participants (73%) demonstrated average levels of self-regulation development, indicating their capacity to effectively regulate their mental states and behavior. Additionally, a significant proportion (27%) demonstrated high levels of self-regulation. The questionnaire survey conducted by G.S. Nikiforov, V.K. Vasil'ev, and S.V. Firsova also revealed a favorable trend in the experimental group's growth of self-control in terms of behavior, activity, and emotional domain. Specifically, 31% of the athletes displayed elevated levels of self-control in the emotional domain, whereas 69% exhibited average levels. The athletes exhibited elevated levels of self-control and enhanced regulation and self-regulatory abilities compared to the control group. Specifically, 32% of the participants had high levels, while 68% revealed average levels. With respect to behavioral self-control, 30% of the athletes exhibited elevated levels, while 70% displayed average levels. Ultimately, the study demonstrated that the "Mental Self-Regulation in Sport" program successfully improved the self-regulation and self-control skills of athletes, hence enhancing their ability to properly handle their mental states and actions during sporting events. The findings underscore the significance of self-regulation in sports and the possibility of targeted programs to improve these skills in athletes.

Sharp et al. (2013) conducted a study to assess the efficacy of a mental skills training (MST) program for male adolescent elite rugby athletes. To assess the quality-of-service delivery, athlete responses to the MST program, athletes' mental attributes, and the program's perceived impact on athlete performance, three focus groups were conducted with 21 male under-16 rugby athletes and four male coaches who were participating in the MST program. Through the process of inductive-deductive content analysis, a total of 40 subcategories and 16 categories were identified. The participants perceived the MST program as an engaging and well-

structured program that enhanced athletes' comprehension of MST techniques and their knowledge of MST strategies. Additionally, it fostered increased transparency, honesty, and self-regulation in managing rugby performance. Athletes deemed it crucial for their coaches to get a more extensive knowledge and comprehension of MST techniques. Ultimately, athletes acknowledged that the MST skills and procedures they acquired from the MST program were applicable to several sports and aspects of their lives beyond rugby, such as school.

Anderson et al. (2014) conducted a study to examine the ideal psychological state for achieving peak performance in Australian professional athletes. The sample consisted of 17 highly skilled athletes and six coaches, with a rather balanced mix of genders (15 female, eight male). The age of the athletes varied between 19 and 35 years, with an average age of 26.5 years. The age of the coaches ranged from 31 to 55 years, with an average age of 41.2 years. The participants were divided into three groups, each representing a different Olympic sport: rowing (n = 7), swimming (n = 5), and diving (n = 5). All athletes have competed in elite international tournaments, achieving remarkable outcomes, including medals from the Olympics and World Championships. The study utilized semi-structured interviews as a means of gathering data from high-performing athletes and coaches. Subjects were enlisted via national sport institutes, and ethical approval was acquired. The interviews encompassed a range of topics related to peak performance, such as psychological phenomena and the ideal psychological condition for achieving peak performance. The data obtained from these interviews was transcribed for analysis. The study unveiled crucial components of the optimal performance encounter for elite athletes, including confidence, focus, control, present moment thinking, and mental clarity. Automatic execution of performance was a prevalent characteristic of optimal performance. Psychological characteristics such as resilience, self-awareness, and trust in one's talents were found to have a crucial role in attaining optimum performance. Furthermore, a variety of psychological techniques were shown to enhance optimal performance, such as thought control, anxiety management, and maintaining concentration. The study also emphasized the possibility of an ideal psychological condition at peak performance, characterized by anxiety, self-

awareness, mindfulness, optimistic thinking, self-assurance, and mental clarity. The state of achievement was heavily influenced by psychological processes such as self-regulation, exerting control, and having confidence in one's abilities. Performance in this state was frequently characterized as being spontaneous, effortless, and devoid of any recollection of the specifics of the performance.

The literature review on self-regulation and sports performance highlights the importance of self-regulatory skills in optimizing athletes' performance in different sports. These studies repeatedly demonstrate the beneficial influence of self-regulation on athletes' self-efficacy and overall performance. Elite athletes often exhibit exceptional self-regulatory skills, particularly in areas such as reflection and tenacity, which are attributed to enhanced performance. Nevertheless, the current body of research fails to provide a thorough comprehension of the fundamental mechanisms and precise interventions that can improve self-regulation among athletes, particularly considering their varying skill levels and diverse sports. A significant gap exists in terms of identifying tailored strategies and interventions to bridge this gap and enable self-regulation development in athletes, ultimately improving their performance. Further research in this area is essential to provide athletes and coaches with evidence-based techniques to enhance self-regulation and, consequently, sports performance.

Chapter – II

STATEMENT OF THE PROBLEM

Mizoram has the second lowest population in the country. Based on the 2011 census, the population consists of 552,339 males and 538,675 females. Prior to the British arrival, the Mizos engaged in sports and games as a means of entertainment and to showcase their physical abilities. The significance of muscle strength was greatly appreciated due to its crucial role in activities such as agriculture and hunting. Games were utilized for diplomatic objectives throughout the era of colonial rule, and tournaments were shaped by the influence of colonialism. Missionaries introduced sports into the classroom in order to enhance the students' welfare, with the assistance of native intermediaries. Achievement in athletics garnered societal admiration and facilitated professional opportunities. Furthermore, the insufficient allocation of funds towards sports has resulted in economic inequalities. These events served multiple functions in Mizo society, encompassing amusement, social status elevation, and economic implications (Thadou, 2022).

The inaugural sports association in Mizoram was established in 1945, known as the "Aijal Sports Association," under the leadership of Mr. Sangliana as its inaugural President. The 'Aijal Amateur Athletics Club (AAA Club)' was founded in 1965 according to Royte (2008, pp. 20–29). The early sporting endeavors had a crucial role in establishing the groundwork for Mizoram's sports scene, promoting the development of sports groups, clubs, and tournaments that still influence the region's sporting culture today. Additional notable football events in the early years were the Chhotelal Seth Football Shield in 1933 and the Charity Football Match in 1948 (Royte, 2008, pp. 8-12). The Mizos gained confidence and were motivated to actively engage in events outside of Mizoram due to these activities, as well as the establishment of other sporting organizations and contests. The Aijal Sports Association triumphed in the 1965 Inter-District Hockey Championship in Imphal, while Mizo players, joined by non-Mizo teammates from the Assam Rifles, claimed victory in the 1962 N.E. State Football Tournament at Karimganj, earning them the prestigious R.K. Jain Memorial Shield. Mizoram's triumph in this competition represented a noteworthy landmark, since it signified the first time the region had secured a football championship beyond its borders (Royte, 2008, p. 25).

Understanding the psychological factors that affect players' performances is essential in the discipline of sports psychology (Loehr, 1995). The psychological traits of athletes, such as self-efficacy and self-regulation, play a crucial role in determining their performance level (Barling & Abel, 1983; Birrer & Morgan, 2010; Feltz, Short, & Sullivan, 2008; Feltz, Fahrbach, & Mack, 2000; Lane et al., 2004; Anshel, 1995; Anshel & Porter, 1996). Motivational training like Psychological skills training and mental training, which aims to motivate and empower athletes to perform to their highest potential, is one potential way to improve these qualities (Murphy & Tammen, 1998). The effect of motivational training on the self-efficacy, self-regulation, and overall performance of Mizo professional athletes is explored in this study. Earlier studies (Schilling & Hyashi, 2001; Crespo, 2002) have emphasized the importance of mental components in sports performance. Munroe-Chandler, Hall, and Fishburne (2008) found that athletes with elevated self-efficacy tend to possess greater confidence in their talents, resulting in enhanced performance. They also exhibit greater resilience in the face of adversity. According to Mitchell, Hopper, Daniels, George-Falvy, and James (1994; as cited in Redmond, 2010), those with high self-efficacy tend to achieve greater success and perform better compared to those with low self-efficacy. Understanding this is crucial within the context of the Mizo sports community, where the level of competition has increased and sports have evolved from an activity of leisure to an important source of income. Given that sports are now a source of financial sustenance, increased self-efficacy can drive Mizo sports professionals to overcome substantial challenges.

In addition, those with high self-efficacy tend to persist and maintain a consistent level of effort, while individuals with low self-efficacy are more likely to give up (Bandura, 1986). Cultivating a sense of determination by enhancing self-efficacy is crucial in light of the dynamic landscape of sports within the Mizo community, which currently poses a range of intricate challenges. This attribute is essential for developing athletes who can overcome challenges and persistently pursue greatness in an environment characterized by intense rivalry and high expectations. Bandura (1997), Maddux and Meier (1995), DiClemente, Fairhurst, and Piotrowski (1995), and other researchers have discovered that self-efficacy is an

important factor in a variety of psychological problems, such as dietary disorders, anxiety, and substance abuse. Therefore, it is essential to thoroughly explore the contribution of self-efficacy on the psychological well-being of professional sportsmen within the Mizo community. The relevance of optimising athletes' self-efficacy levels is underscored by the potential adverse effects of low self-efficacy, particularly in a population that encounters significant demands and expectations. Increased self-efficacy can operate as a safeguard against mental health issues, enhancing individuals' overall well-being and ability to cope with adversity. Moreover, self-efficacy beliefs have a substantial impact on the physiological reaction of the body to stress, hence affecting the functioning of the immune system (Bandura, 1997; O'Leary & Brown, 1995). These beliefs also affect the release of endorphins, the body's natural painkillers, as well as the activation of catecholamines, a class of neurotransmitters essential for controlling stress and perceived risks (Bandura, 1997; O'Leary & Brown, 1995). Self-efficacy's impact on such physiological processes appears to be particularly significant in the domain of Mizo professional sports, where athletes frequently encounter both physical and psychological pressures. The complex relationships between self-efficacy, stress response, and the body's natural regulatory processes highlight the potential to improve self-efficacy in order to enhance athletes' overall well-being and resilience, as well as their athletic performance. To summarize, the importance of self-efficacy for Mizo professional athletes is complex and has several aspects. It affects their performance, determination, mental state, and physical well-being. Understanding how motivational training affects self-efficacy is essential for maximizing the performance and overall development of Mizo athletes, given the unique challenges and opportunities presented by the changing sports environment in the region.

The capacity to control one's emotions and behavior, known as self-regulation, has been linked to consistent performance and the achievement of goals (Anshel & Porter, 1996; Cleary & Zimmerman, 2001; Jordet, 2009a, 2009b; Kitsantas & Zimmerman, 2002; MacNamara et al., 2010). The importance of self-regulation in the domain of Mizo professional sports cannot be overstated, as it promotes athletes' overall well-being and performance. Multiple comprehensive

studies have consistently shown that self-regulation plays a vital role in the success of athletes across various domains (Nicholls et.al. 2010; Pilgrim et al., 2018, McCormick et al., 2019). In their study, Nicholls et al. (2010) discovered a correlation between self-regulation and decreased levels of both physical and cognitive anxiety. This suggests that self-regulation could potentially mitigate the psychological stress commonly experienced in competitive sports. Furthermore, it has been linked to improved pre-competition readiness, enabling athletes to effectively manage their mental states and focus on performance-oriented activities (Pilgrim et al., 2018). Endurance athletes require self-regulation skills to optimize their performance. A study conducted by McCormick et al. (2019) has demonstrated that it exerts a favourable influence on endurance performance, enabling athletes to maintain their effort levels and effectively regulate fatigue. The ability to efficiently manage their mental and physical resources across extended tournaments may lead to substantial consequences on their achievements and results of elite Mizo athletes involved in physically demanding sports.

Studies have demonstrated that self-regulation improves athletes' ability to make decisions, which is a vital component in sports. Athletes can utilize it to maintain their focus, withstand disruptions, and demonstrate sound judgement when faced with time limitations (Furley et al., 2013). In sports, the capability to regulate one's emotional state while maintaining cognitive clarity is essential. This is because split-second decisions can have a significant impact on game-altering situations. Self-regulation also promotes the improvement of cognitive and physical skills. When athletes have the ability to regulate their focus and emotions, they are more likely to practice well and develop their skills (Elbe & Wikman, 2017). The significance of this component is particularly important for Mizo athletes who are striving to improve their technical skills and achieve in their respective sports disciplines. Athletes in the Mizo context encounter a plethora of complicated factors, encompassing cultural, environmental, geographical, and societal aspects that are distinct to the area. To attain success within this specific framework, it is essential for Mizo athletes to have exceptional self-efficacy and self-regulation. Athletes with such attributes are able to skilfully navigate an intricate system of

challenges while safeguarding their mental well-being. As athletes juggle their sporting obligations with numerous life responsibilities, the ability to regulate emotions, handle stress, and make wise decisions becomes increasingly vital.

Considering the aforementioned relevant studies, the researcher recognized the necessity for interventions targeting the improvement of self-efficacy, self-regulation, and performance among Mizo athletes. Nevertheless, there is still a lack of research regarding the precise influence of motivational training on these psychological traits among Mizo Professional Sportsmen. Prior studies have examined the significance of psychological factors in sports performance (Vanlalruati, 2018; Lama & Praveen, 2017). Nevertheless, there remains an insufficiency in evidence regarding the effectiveness of motivational training designed specifically for professional Mizo players. An in-depth analysis is required to explore the impact of motivational training on self-efficacy, self-regulation and overall performance of athletes in the Mizo sports setting, considering the unique cultural and environmental factors that shape this region. Furthermore, these interventions not only strive to enhance The research seeks to collect data on the effects of these interventions to produce empirical evidence of the beneficial impact that psychological training can have on athletes' overall well-being and athletic accomplishments. This empirical foundation not only offers immediate benefits to Mizo athletes, but also contributes to the evolution of research on the crucial role of psychology in the overall growth and potential of athletes. This study aims to raise awareness throughout the sports community about the concrete benefits that a comprehensive psychological approach may offer as a means of enhancing players' performance and cultivating their development as individuals. This will be substantiated by empirical evidence obtained through tailored therapeutic approaches. The primary objective is to reduce the gap in understanding between theory and practice, promoting a culture of psychological empowerment within Mizo sports and beyond.

The primary objective with the present study is aimed at examining the influence of motivation on the self-efficacy, self-regulation, and performance of

Mizo professional players across various sports disciplines. The study aims to shed light on the potential benefits of integrating motivational training strategies into athletes' preparation and training programs through an examination of these variables. The objective is to offer valuable knowledge on how to optimize athletes' mental readiness and strengthen their capacity to consistently perform at their peak levels. Acquiring this understanding can facilitate the development of more effective strategies to enhance athletes' psychological states, hence resulting in improved performance outcomes.

The present study has implications that go beyond academia and encompass strategies for athletic development. The obtained knowledge could be used as a basis for developing training programs and interventions that are culturally and contextually appropriate for Mizo athletes. By familiarizing themselves with the specific motivating factors involved, coaches and sports psychologists can tailor their techniques to meet the unique needs and objectives of Mizo professional athletes. This focused strategy enhances the players' commitment to excellence while also fostering a supportive and empowering atmosphere. Therefore, findings from this research have the prospect of laying the foundation for cultivating a culture of continuous improvement, adaptability, and success among Mizo athletes.

In essence, the contribution of this study surpasses the boundaries of academic research. It can improve progress in the field of sports psychology and athlete development strategies by providing knowledge that can be applied in practice. This study establishes a basis for enhancing mental conditioning techniques and tailored treatment strategies by revealing the complex interrelationships among motivational training, self-efficacy, self-regulation, and performance in Mizo Professional Sportsmen. The study's findings have the potential to motivate athletes to continually strive for their utmost performance, fostering a culture of excellence and accomplishment within the Mizo sporting community.

Scope and limitations: The study primarily focuses on Mizo professional athletes across several sports. Recognizing specific limitations is essential, despite the valuable perspectives offered by this targeted approach in evaluating the

influence of motivational training on self-efficacy, self-regulation, and performance. The findings may lack generalizability to all Mizo athletes owing to the distinct attributes of each athlete and the particular nature of their individual sports. Although we will strive to ensure a varied sample, the complex interaction of individuals' backgrounds, experiences, and sports disciplines may lead to subtle responses that the study may not completely cover. Hence, despite their importance within the specific population being examined, precaution must be taken when interpreting the results for the larger Mizo sports community. The study alone investigates the effects of motivational training, self-efficacy, self-regulation, and performance. Due to this emphasis, other psychological aspects that significantly affect athletes, such as mentality, coping mechanisms, and emotional regulation, are not taken into account. The study makes a noteworthy contribution; however, it is important to acknowledge that athletes' overall performance is influenced by an array of psychological factors.

To summarize, this study provides valuable insights into the influence of motivational training on the self-efficacy, self-regulation, and performance of Mizo professional athletes. Nevertheless, it is crucial to take into account the limitations and certain aspects that were not addressed in the study. The results offer valuable insights within their limitations, but the intricate nature of athletes' experiences requires a comprehensive perspective that considers a range of psychological elements.

Objectives of the study:

Based on the theoretical foundation pertaining to the research problem, the following objectives were framed for the present study:

1. To examine the levels of the participant's Self-efficacy, Self-regulation and Achievement Motivation.

2. To find out the relationship between the Self-efficacy, Self-regulation and performance of the participants in the study.

3. To compare the level of Self-efficacy, Self-regulation between the Professional Sportsmen and the non-sportsmen group

4. To determine the effect of motivational training on Self-efficacy and Self-regulation of the participants.

5. To determine the effect of Achievement Motivation on Self-efficacy and Self-regulation of the non-sportsmen.

6. To determine the effect of Achievement Motivation on Self-efficacy, Self-regulation and performance of the Professional Sportsmen.

7. To examine the effect of motivational training on the performance of the Professional Sportsmen.

Hypotheses:

1. The original version of the scales will show higher levels of scores on Self-efficacy, Self-regulation and Achievement motivation compared to the translated version of the scales

2. Positive correlation will emerge for Self-efficacy, Self-regulation and performance of the participants in all possible combination.

3. The Professional Sportsmen as compared to the non-sportsmen group would show higher level of scores on Self-efficacy and Self-regulation

4. The Training groups will show higher mean scores in Self-efficacy and Self-regulation compared to the No-training groups

5. Non-sportsmen with High Achievement Motivation will show higher mean scores in Self-efficacy and Self-regulation compared to Low Achievement motivation groups

6. Sportsmen with High achievement motivation will show higher mean scores in Self-efficacy and Self-regulation compared to Low Achievement motivation groups

7. Professional Sportsmen who received the training will show higher mean scores in performance compared to the sportsmen who did not receive the training

Chapter – III

METHODS AND PROCEDURE

This chapter provides a comprehensive explanation of the research methodology employed in the current study. The information pertaining to the study location, variables being studied, operational definitions of independent and dependent variables, instruments used in the study, phases of the research study that provide details about the sample, research design, administration procedure, and statistical analysis of Phase are mentioned in this chapter.

The initial stage of the study involved translation of questionnaires from English to Mizo, the native language of the people in Mizoram. Subsequently, efforts were directed toward the development of a sport performance index that was customized for the athletes who participated in the study. Finally, experimental research was carried out, involving three phases: baseline, intervention, and assessment.

Research Location

All three phases of the study were carried out exclusively in Mizoram, which served as the consistent location throughout the entire process. Mizoram is situated in the extremely secluded area of the northeastern region of India.

The first and second phases took place in the capital of Aizawl district, while the third phase occurred at academies and sports clubs in Aizawl and Lunglei.

Variables of the Study

The following independent, dependent and sociodemographic variables have been taken for the study:

Independent Variables

The independent variables were sport participation, achievement motivation, and motivational training. Motivational training is the factor that is manipulated to examine its effect on the dependent variable.

Dependent Variables

The dependent variable in this study was a combination of self-efficacy, self-regulation, and the performance of professional sportsmen. These are the variables that the researcher was interested in measuring to determine whether the motivational training has had an effect on them.

Sociodemographic Variables

Sociodemographic variables included address, age, gender, parent's marital status, housing tenure, number of family members, and family income.

Operational Definition of the Variable

Professional Sportsman

A professional sportsman is defined as "a person who actively participates in competitive sports through a sports academy or sports club. Typically, professional sportsmen are trained performers who compete in various categories of local, regional, national, and international organized sports competitions" (Merriam-Webster, n.d., para. 1).

Self-efficacy

Self-efficacy is operationally defined as the total score obtained on the General Self-Efficacy Scale (GSES), developed by Schwarzer and Jerusalem (1995).

Self-regulation

Self-regulation is operationally defined as the total score obtained on the Self-Regulation Scale (SRS) developed by Schwarzer, Diehl, and Schmitz (1999).

Achievement motivation

Achievement motivation is operationally defined as the total score obtained on the Achievement Motives Scale (AMS-R) developed by Lang and Fries (2006).

Performance Index

Performance in the context of sports can be operationally defined as the observable behavior and actions of athletes during a competition or training session, which can be evaluated based on predetermined criteria such as speed, accuracy, technique, or outcome (Weinberg & Gould, 2015).

Motivational Training

Motivational training is operationally defined as a structured program aimed at enhancing an individual's motivation to achieve their goals. In the current study, motivational training included a combination of techniques such as goal-setting, positive self-talk, and visualization, which were delivered through a series of sessions.

Psychological Tools:

1. **Achievement Motives Scale** (Lang & Fries, 2006): It was a 10-item scale with two dimensions, namely, hope of success and fear of failure. This scale is a revised version of the original Achievement Motives Scale, which consisted of 30 items. The scale's reliability, inter-scale correlations, and criterion-related validity were established with respect to typical criteria of achievement-related behavior. The scoring is done on a 5-point Likert scale with 1 (totally disagree), 2 (disagree), 3 (agree), and 4 (totally agree) based on direct scoring. The first five questions, when added up, will give the score for hope of success (HS), and the next five questions (6–10) will give the score for fear of failure (FF). Higher scores on hope of success indicated a higher level of hope for success, and higher scores on fear of failure indicated a higher level of fear of failure.

2. **General Self-Efficacy Scale:** The General Self-Efficacy Scale (Swhwarzer & Jerusalem, 1995) is a 10-item scale (English version). It measures an individual's general sense of perceived self-efficacy to cope effectively with stressful life events (e.g., 'I am confident that I could deal efficiently with unexpected events'). The scale is designed for the general adult population. The

scale items are scored on a 4-point Likert scale, ranging from 1 (‘’ not at all true’’) to 4 ("exactly true’’). The score ranges from 10 to 40 points; higher scores reflect greater belief in their ability to overcome difficult tasks, while lower scores indicate a lower belief in one's ability. Responses are calculated to get a total score.

3. **Self-Regulation Scale:** The Self-Regulation Scale (Schwarzer et al., 1999) is a 10-item scale used to assess participants' level of self-regulation (SRS). It measures how individuals maintain their focus and attention when facing challenges in achieving a goal. The scale is specifically designed to capture attention control in the process of goal pursuit. (e.g., ‘If I am distracted from an activity, I don't have any problem coming back to the topic quickly’’. The scale items are scored on a 4-point Likert scale, ranging from 1 being "not at all true’’ to 4 being ‘’exactly true’’. The score ranges from 10 to 40 points. Higher scores reflect a greater ability to control and maintain one’s attention (e.g., self-regulation), and lower scores indicate lower self-regulation. There are ten reverse scores in the SRS; these are the numbers (5, 7, 9). Responses are calculated to get a total score.

4. **Sport Performance Index**: Based on a literature review and consultations taken from coaches, athletes, and experts in each specific sport discipline, the sport performance index was specifically designed for the study.

Translation of the tools

Translation was done for the English versions of the Psychological Tools into Mizo, the native tongue of the Mizo people. Permission to use the psychological tools was sought from all their respective authors. It was intended to familiarize the researcher with the administration procedure of the tool, determine the time required for the assessment, examine the clarity of the words used in the questionnaire, and determine the reliability of the questionnaires used.

Steps involved in the translation of the questionnaires

Step 1. The Self-Regulation Scale (Schwarzer et al., 1999), the General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995), and the Achievement Motives Scale (Lang & Fries, 2006) were chosen by the researcher as the original English-standardized questionnaires to address the research objectives.

Step 2. Mizo (B) Translation: Three qualified translators, with fluency in both English and Mizo, were chosen to translate the surveys. Each translator autonomously translated the questions into Mizo, and thereafter, their translations were compared to identify any inconsistencies. The translators were instructed to maintain the intent and meaning of the queries while ensuring that the language was suitable for the Mizo language and culture. Subsequently, the three translations were then combined to form a single translation, designated as B.

Step 3. English back-translation (B): For the back-translation of the questionnaires into English, a proficient translator who was fluent in both Mizo and English was chosen. The back-translated questionnaires were then compared with the original questionnaires to ensure that the questions' meanings had been translated precisely.

Step 4: Comparison and reconciliation of the two versions (A and B): To identify any discrepancies in meaning, a comparison was made between the original English questionnaires (A) and the back-translated questionnaires (B). The discrepancies were addressed with the translators and resolved.

Step 5. Evaluation of translated questionnaires: The translated questions were subsequently evaluated using a sample of Mizo-speaking participants. The responses were analyzed to establish the validity and reliability of the questionnaires in Mizo language and culture.

The A-B-B-A technique was employed to ensure that the translated questionnaires accurately measured the relevant variables and were appropriate for use in the Mizo-speaking participants' study.

Statistical Analyses

Cronbach's alpha was calculated to determine the internal consistency of inter-item reliability, and split-half reliability was determined. The test-retest reliability was determined using Pearson's product moment correlation.

Reliability of Translated Tools

The Cronbach's alpha for the Self-Regulation Scale (Schwarzer et al., 1999), the General Self-Efficacy Scale (Swhwarzer & Jerusalem, 1995), and the Achievement Motives Scale (Lang & Fries, 2006) was found to range from.50 to.80 with a sample size of 103 young adults. In addition, the split-half reliability values ranged from.50 to.80. Furthermore, the test-retest values for the psychological tools ranged between.50 and.70. The translated versions of the psychological assessment tools were found to be valid and reliable for use in the research study.

Sport Performance Index

The next step involved the development of the Sport Performance Index, which was created through a comprehensive literature review and consultations with coaches, athletes, and subject matter experts from each sport discipline. The "Khelo India Fitness Assessment in Schools Version 2.0 Administration Manual Book" (Sports Authority of India, 2019) was also consulted for its parameters and guidelines. The measurement was developed specifically for the purposes of the investigation. In order to establish items and themes for the index, focus group discussions and interviews were also carried out among relevant groups. These discussions were held with the purpose of gaining significant insights and concepts that could be applied to the index's construction.

The performance index for each of the seven sports disciplines included in this study is shown below:

Taekwondo

The Taekwondo Performance Index had four components, with each being evaluated on a scale of 10 by their respective coaches: agility, speed, reaction (1 minute), and balance (1 minute). It was constructed in accordance with the instructions in the Khelo India Fitness Assessment in Schools Version 2.0 Administration Manual Book (Sports Authority of India, 2019). The participants' ability to quickly change directions while keeping their balance served as a measure of their agility. The participant's speed, on the other hand, was assessed based on their ability to execute techniques quickly and precisely. The reaction component assessed the participant's ability to respond rapidly to a stimulus, whereas the balance component measured the participant's ability to maintain balance in different positions. The overall Taekwondo Performance Index score for each participant was determined by combining the component scores. The ratings were assigned by competent coaches with expertise in grading sportsmen and a working knowledge of the sport.

Judo

The Judo performance index consisted of six components: speed, strength (measured in kilograms), flexibility, agility, speed throw (measured within 10 seconds), and technique show. The selection of these components was made considering their relevance to the discipline of judo and their capacity to enhance overall performance. Speed, in this context, is the capacity to implement judo moves efficiently and quickly. Strength, typically quantified in kilograms, is essential for performing throws and holds. Flexibility is a crucial aspect of judo as it allows the body to effortlessly perform a wide range of moves. Agility is the ability to rapidly change directions, which is essential for avoiding an opponent's attack and executing a counterattack. A speed throw timed within 10 seconds indicates the ability to

execute a throw quickly. Technique show, the most important aspect of judo, refers to the precision with which various techniques are executed.

Boxing

Shadow boxing and sparring were used in calculating the boxing performance index. Experienced coaches evaluated shadow boxing and sparring using a 10-point scale, where higher scores indicated better performance. Shadow boxing involves one's ability to simulate a fight without an actual opponent, whereas sparring entails one's ability to engage in combat with an actual opponent. Both shadow boxing and sparring are essential aspects of boxing training and performance, and the performance index score for each component measures the boxer's competence in these two domains. The instructors were instructed to assess the technique, speed, power, defense, and overall performance of each boxer.

Karate

The assessment of karate athletes was conducted using three measures: sparring, speed testing, and kata dancing. Instructors assessed the performance of participants in simulated combat situations during sparring using a 10-point scale. Participants were required to execute a sequence of kicks within a time frame of 15 seconds during the speed test. The last component of the performance index was the kata dance, in which participants executed a series of motions and techniques while instructors assessed their performance using a 10-point scale.

Weightlifting

The weightlifting performance was assessed using two standard weightlifting movements, namely the Snatch, Clean, and Jerk. The snatch involves lifting the weight from the ground to an overhead position in one continuous and smooth motion. Clean and Jerk is a weightlifting exercise that involves two distinct steps: first, raising the weight from the ground to the shoulders (Clean), and then raising the weight from the shoulders to an overhead position (Jerk). The weight lifted in both

the Snatch and Clean and Jerk was recorded in kilograms, which were used as a measure of weightlifting performance.

Volleyball

The volleyball performance index was created by combining various components. The assessment consisted of measuring nine components on a 10-point scale: volley service, blocking, spike, defense, communication, fingering, underarm pass, timing, and agility. The coaches, who possess expertise in the sport and have experience in assessing participant performance, evaluated each component. The rating was based on the players' overall performance and proficiency in each of the components during a practice session. In this study, the ratings for each component were combined to provide a comprehensive performance score for each participant, which was used as a measure to evaluate their volleyball performance.

Football

In football, participants' performance was evaluated based on their position on the field. The performance measures differed across different positions.

Midfielders: Passing completion rates are an important performance indicator for midfielders. The passing rate was measured at six distinct levels: 100%, 90%, 80%, 70%, 60%, and 50%, with corresponding point values of 6, 5, 4, 3, 2, and 1. Interception is another essential performance indicator for midfielders. The number of successful interception attempts was counted, with three successful attempts earning one point, six successful attempts getting two points, and nine successful attempts earning three points. Goals were awarded five points per goal, while assists were awarded three points per successful assist. In addition, players who played for more than 70 minutes were awarded 2 points, and those who maintained a clean sheet were awarded an extra point.

Forwards: For forwards, the number of successful shots on target was assessed, with three successful attempts earning one point and six successful attempts earning two points. For shots off target, there was a -3 penalty for every

unsuccessful attempt and a -6 penalty for every six unsuccessful attempts. Goals were awarded five points per goal, while assists were awarded three points per successful assist. In addition, players who played for more than 70 minutes were awarded 2 points, and those who maintained a clean sheet were awarded an extra point.

Defenders: For defenders, tackles won were measured; three successful attempts earned one point; six successful attempts earned two points; and nine successful attempts earned three points. Two points were deducted for every goal conceded when a penalty was committed. Goals were awarded five points per goal, while assists were awarded three points per successful assist. In addition, players who played for more than 70 minutes were awarded 2 points, and those who maintained a clean sheet were awarded an extra point.

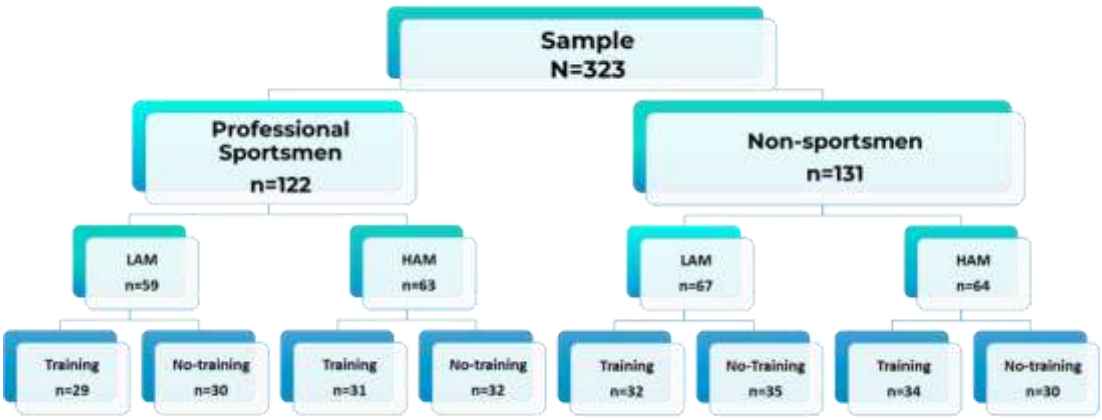
Goalkeepers: The number of saves made by goalkeepers was tallied, with three successful attempts earning one point and six successful attempts garnering two points. Goals conceded were measured at -2 for every 2 goals and -4 for every 4 goals. Penalty saved was also counted, with 1 point awarded for every 3 successful attempts and 2 points awarded for 6 successful attempts. Assists were evaluated similarly to midfielders. In addition, players who played for more than 70 minutes were awarded 2 points, and those who maintained a clean sheet were awarded 4 points.

Design of the study:

The study employed 2 ‘Sportsmen’ (Professional Sportsmen vs. Non-Sportsmen) x 2 ‘Achievement Motivation’ (Low vs. High Scorers) x 2 ‘Motivational Training’ (Training vs. No-Training). Therefore, the 2x2x2 factorial design (Sportsmen x Achievement Motivation x Motivational Training) was imposed on self-efficacy and self-regulation for the overall design. The main study had three phase: baseline, intervention, and evaluation.

Figure 1

The 2x2x2 factorial design (Sportsmen x Achievement Motivation x Motivational Training)



Sample:

Baseline: A total of 323 participants were selected for phase one-the baseline phase of the study, of which 122 were professional sportsmen and 131 were non-sportsmen. The data from 323 participants was gathered and then sorted according to their achievement motivation ratings. This was accomplished after excluding 50 incomplete and recurrent replies as well as 20 individuals who dropped out owing to health and commitment concerns. The median split method was used to divide the participants into two groups: those with low achievement motivation and those with high achievement motivation. Random allocation of the groups to training and no-training was further done.

The age bracket of 13–30 was chosen for the current study as it aligns with the youth demographic that is frequently targeted by sports development initiatives in India, including Mizoram (Ministry of Youth Affairs and Sports, 2021).

Inclusion criteria for the groups:

Professional Sportsmen Group

- Participants should be sportsmen from state and district-level sports clubs and academies.
- The sportsmen should have at least one year of experience in competitive sports.
- Age:13-30 years

Non-sportsmen Group

- Participants should not be under any sports club.
- They may or may not play sports, but they should be limited to being recreational players.
- Age: 13–30 years

Exclusion Criteria

Professional Sportsmen Group

Participants will be excluded from the study if they:

- Are under 13 or over 30 years of age.
- Have less than one year of experience in competitive sports.
- Have any physical or mental health conditions that could affect their ability to participate in the study.
- Are under medication that may affect their cognitive or physical abilities.
- Have previously participated in any achievement motivation training programs.
- Do not provide informed consent to participate in the study.

Non-sportsmen Group

Participants will be excluded from the study if they:

- Are under 13 or over 30 years of age.
- Are currently a member of any sports club.
- Have significant experience in competitive sports, defined as more than one year of experience at the state or district level.
- Have any physical or mental health conditions that could affect their ability to participate in the study.
- Are under medication that may affect their cognitive or physical abilities.
- Have previously participated in any achievement motivation training programs.
- Do not provide informed consent to participate in the study.

Intervention: In this phase, participants were randomly assigned to either the training or no-training group. The training group underwent the motivational training program, while the no-training group served as the control and did not receive any form of motivational training.

Table 1

Distribution of the sample in Phase three

	Low Achievement Motivation		High Achievement Motivation		Total
	Training	Non-training	Training	Non-training	
Professional Sportsmen	29	30	31	32	122
Non-Sportsmen	32	35	34	30	131
Total	61	65	65	62	253

Motivational training:

In the research study, the term "Motivational Training" was used instead of "Psychological Skills Training (PST)" to highlight the specific focus on enhancing

motivation among the participants. The study aimed to investigate the effects of a training program that specifically targeted motivation using psychological skills training techniques such as self-talk, visualization, goal setting, and self-awareness. By using the term "Motivational Training," the research emphasized the primary objective of enhancing motivation and its potential impact on self-efficacy, self-regulation, and overall performance among Mizo sportsmen.

The motivational training intervention was designed to promote positive psychological attributes through eight sessions that focused on various techniques to develop motivation and self-awareness, such as cognitive restructuring, relaxation, self-talk, visualization, and goal-setting.

Session 1 (Orientation)

The orientation session is designed to provide an overview of the program and establish rapport between the facilitator and the participants. The purpose of this session is to alleviate anxiety and encourage a positive attitude towards the training. Research has shown that a positive attitude towards training is associated with greater motivation and better performance (Latham & Pinder, 2005).

Session 2 (Self-Awareness)

Self-awareness is an essential component of motivation because it enables individuals to align their goals with their values and abilities by identifying obstacles (Kreibich et al., 2020). Self-awareness plays a pivotal role in replacing maladaptive responses and driving positive psychobehavioral change (Grant, 2001; Carver & Scheier, 1998). Moreover, in the context of sports, heightened emotional awareness has been associated with superior performance (Zizzi et al., 2003).

Session 3 (Cognitive Restructuring)

Cognitive restructuring is a structured, collaborative therapeutic approach in which individuals are taught to recognize, assess, and change the false beliefs, judgments, and thoughts that are thought to be the cause of their psychological disturbance (Burns & Beck, 1978; Dobson & Dozois, 2010; Hollon & Dimidjian,

2009). Cognitive restructuring assists individuals in identifying and challenging negative beliefs (Al-Refae, 2021). According to research, negative thinking and emotions are associated with decreased motivation and poor performance (Cadinu et al., 2005; Deffenbacher, 1977; Roekel, 2019). Techniques for cognitive restructuring, such as thought-stopping and reframing, can assist individuals in replacing negative thoughts with positive ones, thereby enhancing motivation and performance.

Session 4 (Relaxation)

The session is designed to assist individuals in managing anxiety and stress, which can hinder motivation. According to research, relaxation techniques, such as deep breathing and progressive muscle relaxation, can reduce tension, help in the recovery process, and regulate negative emotions, which could have an impact on an athlete's performance (Jerath et al., 2015; Sherman & Plummer, 1973; Kellmann et al., 2006).

Session 5 (Self-Talk)

The session is designed to assist participants in developing positive self-talk. Researches have shown that self-talk leads to increased self-efficacy, motivation, performance and others (Hatzigeorgiadis et al., 2011; Weinberg et al., 1992; Putri, 2021; Van Raalte et al., 1994; Ming & Martin, 1996).

Session 6 (Visualization)

The purpose of Session 6 (Visualization) is to help individuals visualize their goals and success. Visualization techniques can assist individuals in achieving their objectives in numerous areas of life. Visualization techniques have been found to enhance motivation and performance in sports (Sari, 2015; Ungerleider & Golding, 1991; Veraksa & Gorovaya, 2012).

Session 7 (Goal-Setting)

The goal-setting session is designed to assist participants in establishing achievable and realistic goals. According to research, goal-setting is associated with

increased motivation and enhanced performance (Locke & Latham, 2013; Latham, 2004; Locke et al., 1981).

Session 8 (Debriefing)

The session is designed to provide participants with an opportunity to reflect on their experiences throughout the program. Research has shown that reflection can help individuals learn from their experiences and develop new insights (Abatzis & Littlewood, 2015).

In conclusion, the motivational training intervention is a research-based intervention that can assist individuals in developing positive psychological attributes, such as self-efficacy, self-esteem, and optimism, which are essential for developing and maintaining motivation. The intervention consists of eight sessions that emphasize various techniques to increase motivation and self-awareness, including cognitive restructuring, relaxation, self-talk, visualization, and goal-setting.

Procedure of administration

To conduct the training within the premises of the academy, the researcher approached the concerned authorities for permission.

Baseline: The participants were given the background demographic profile and three self-reported scales: the Achievement Motives Scale (Lang & Fries, 2006), the General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995), and the Self-Regulation Scale (Schwarzer et al., 1999). Before the test administration, instructions were given clearly before filling out the questionnaire, and the time duration provided was thirty minutes. As the responses would be unique to each individual based on their personal experiences, they were instructed to respond spontaneously and not to discuss the questions with anyone else.

The experimental group's training procedure consisted of a carefully curated program of eight sessions, each aimed at promoting positive psychological attributes. The sessions consisted of various activities, including orientation, self-awareness, cognitive restructuring, relaxation, self-talk, visualization, goal-setting, and

debriefing. The intervention was conducted for a period of 4 weeks, during which participants attended training sessions every two weeks, with each session lasting no more than 60 minutes. To ensure fairness and consistency of results, the program was standardized among all participants.

Session 1: Introduction (Week 1). The first session of the intervention aimed to introduce the program and its objectives to the participants. The session started with the facilitator explaining the objective of the intervention. Expectations were established for the group, and the importance of attending all sessions was emphasized. Participants were prompted to inquire and clarify any doubts they may have had. Furthermore, the facilitator created rapport and trust with the participants through open communication.

Session 2: Self-Awareness (Week 1) The subsequent session centered on cultivating self-awareness. The facilitator helped participants become more aware of their strengths and weaknesses in the context of their sport or as a person in general. The session began with a discussion of the significance of self-awareness and the positive effects it can have on performance and well-being. The facilitator then guided the participants through activities aimed at identifying their strengths and weaknesses. For instance, the participants actively participated in self-reflective activities, such as writing a journal or evaluating their abilities, and got constructive criticism from coaches or teammates.

For the non-sports population, participants were provided examples of how self-awareness can help them manage their emotions in daily life. Identifying negative ideas, for example, can assist individuals in formulating a strategy to conquer them.

Session 3: Cognitive Restructuring (Week 2) The third session aimed to develop cognitive restructuring skills. The facilitator assisted participants in recognizing negative thoughts that could hinder their performance and substituting them with constructive ones. The session proceeded with a discussion on the influence of negative thoughts on one's performance. The facilitator then introduced

participants to cognitive restructuring techniques, such as reframing negative thoughts and replacing them with positive affirmations. The participants were advised, for instance, to work on recognizing negative ideas associated with their sport and substituting them with positive ones, like "I can improve" or "I can accomplish my goals."

For the non-sports population, the participants were given examples of how cognitive restructuring can assist individuals in overcoming self-doubt and negative beliefs. Reframing negative beliefs into positive ones, for instance, can help individuals develop confidence and self-esteem.

Session 4: Relaxation (Week 2) The primary objective of the fourth session was to guide participants in various relaxation techniques. The instructor instructed the participants in a range of relaxation techniques, including the 4-7-8 breathing method and progressive muscular relaxation. The session began with a discussion on the advantages of relaxation and its impact on performance. The facilitator thereafter led the participants in a series of diverse relaxation exercises and urged them to routinely engage in these techniques. For example, the participants were encouraged to practice the 4-7-8 breathing technique before a game or practice in order to alleviate anxiety and improve performance.

For the non-sports population, the participants were given examples of how relaxation techniques can benefit individuals in effectively managing stress in their everyday lives. Deep breathing can effectively help individuals cope with anxiety during high-pressure situations, while visualization can be beneficial for managing stress and anxiety.

Session 5: Self-Talk (Week 3) The fifth session aimed to cultivate positive self-talk skills. The facilitator taught participants how to use positive self-talk to improve their confidence and performance. The session began with a discussion on the impact of self-talk on performance. The facilitator proceeded to familiarize the participants with strategies such as self-affirmations and positive self-talk, encouraging them to practice these techniques regularly. Participants, for example,

were given instructions to employ positive self-talk like "I am strong" or "I can do this" before and during competition.

For the non-sports population, participants were provided examples of how positive self-talk can help individuals build confidence and self-esteem. For instance, using positive affirmations can help individuals overcome self-doubt and negative beliefs.

Session 6: Visualization (Week 3) The sixth session aimed to develop visualization skills. The facilitator instructed the participants on the use of visualization techniques to optimize their performance. The session began with a discussion on the advantages of visualizing and its influence on performance. The facilitator then guided participants through a visualization exercise focused on their sport, where they visualized themselves performing well and achieving their goals. For example, the participants were encouraged to visualize themselves successfully accomplishing a challenging activity, such as making a difficult shot or completing a complex routine.

For the non-sports population, participants were provided examples of how visualization techniques can help individuals achieve their goals in various areas of their lives. Visualizing success in a job interview or presentation, for example, can help people gain confidence and motivation.

Session 7: Goal-Setting (Week 4) The seventh session aimed to develop goal-setting skills. The facilitator helped participants identify short-term and long-term goals related to their sport and develop an action plan to accomplish them. The session began with a discussion on the importance of goal-setting and its impact on performance. The facilitator subsequently led the participants in a goal-setting activity employing the SMART (Specific, Measurable, Achievable, Relevant, Time-bound) approach.

For the non-sports population, participants were provided examples of how goal-setting can help individuals achieve their personal and professional goals.

Setting a precise objective, such as acquiring a new skill or finishing a project, can assist individuals in maintaining motivation and attaining their goals.

Session 8: Debriefing (Week 4) The final session centered on the process of debriefing and reflection. The facilitator helped participants reflect on their progress throughout the intervention and identify areas for improvement. The session began with a discussion on the advantages of reflection and its impact on one's performance. The facilitator guided participants through a debriefing exercise, where they shared their experiences and reflected on the program's effectiveness. For example, participants were asked to discuss any changes they noticed in their performance or mindset and identify any areas where they still struggled and could benefit from further work. The facilitator provided participants with feedback and support to enable them to continue making progress even after the program concluded.

A post-test evaluation was administered to assess changes in the targeted psychological constructs of self-efficacy and self-regulation, while the athletes' performance was assessed using the sport performance index. Besides, the participants under ‘Professional Sportsmen’ had to further undergo pre- and post-tests on the ‘Sport Performance Index’.

Table 2

Fundamental outline of the study

Sample	Baseline Measure	Achievement Motivation	Treatment Condition: (Motivational Training: 8 Sessions 1 hour duration, 2 times/week for 4 weeks)	Post-Treatment Condition
Professional Sportsmen	*Achievement Motives Scale, General Self-Efficacy Scale, and Self-Regulation scale (*Separate baseline measure on Sport Performance Index for Professional Sportsmen)*	Low Scorers	Training	General Self-Efficacy, Self-Regulation and Sport Performance Index
			No-Training	
		High Scorers	Training	
			No-Training	
Non-Sportsmen		Low Scorers	Training	General Self-Efficacy and Self-Regulation
			No-Training	
		High Scorers	Training	
			No-Training	

Statistical Analyses

Data collected from Phase 3 were analyzed statistically using Statistical Package for Social Sciences (SPSS) version 16.

1. Descriptive statistics (mean, standard deviation, skewness, kurtosis, etc.) were used to describe the general characteristics of the variables under study.
2. Reliability tests: Cronbach's alpha was calculated to establish the internal consistency for inter-item reliability, and split-half reliability was established.
3. Pearson's product-moment correlation coefficient: This was used to ascertain the relationship between achievement motivation, self-efficacy, and self-regulation.
4. Three-way ANCOVA: This analysis of covariance was conducted to examine the effect of the motivational training program on the dependent variables of self-efficacy, self-regulation, and performance, while controlling for the covariate of self-efficacy pre-test, self-regulation pre-test, and performance pre-test. The Scheffe test was further used to evaluate pairwise differences and significant differences between levels of independent variables and dependent variables.
5. The assumption for the parametric test was not met for the general self-efficacy scale; hence, the Mann-Whitney U-test, Wilcoxon signed-rank test, Kruskal-Wallis test, and Steel dwass test were performed instead.

Chapter – IV

RESULTS

The present study entitled "Impact of Motivational Training on Self-efficacy, Self-regulation and Performance of Mizo Professional Sportsmen" aimed to assess the levels of self-efficacy, self-regulation, and achievement motivation among participants, explore the relationships between self-efficacy, self-regulation, and performance, compare these levels between professional sportsmen and non-sportsmen, investigate the impact of motivational training on self-efficacy and self-regulation, assess the effect of achievement motivation on self-efficacy and self-regulation in non-sportsmen, evaluate the influence of achievement motivation on self-efficacy, self-regulation, and performance in professional sportsmen, and examine the overall effect of motivational training on the performance of professional sportsmen.

It was hypothesized that the original version of the scales would yield higher scores on self-efficacy, self-regulation, and achievement motivation compared to the translated version; that positive correlations will emerge among self-efficacy, self-regulation, and performance in all combinations; that professional sportsmen will show higher scores in self-efficacy and self-regulation compared to the non-sportsmen group; and that the training groups will show higher mean scores in self-efficacy and self-regulation than the no-training groups. Non-sportsmen with high achievement motivation were expected to show higher mean scores in self-efficacy and self-regulation compared to low achievement motivation groups; that sportsmen with high achievement motivation will exhibit higher mean scores in self-efficacy and self-regulation than their low achievement motivation counterparts; and that professional sportsmen who received training will show higher mean scores in performance compared to sportsmen who did not undergo training.

To address the outlined objectives and hypotheses, a sample of 323 young adults from Mizoram, aged 13 to 30, underwent assessment using three psychological instruments: the Achievement Motives Scale (Lang & Fries, 2006), the Self-Regulation Scale (Schwarzer et al., 1999), and the General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995). A Sport Performance Index, specially designed for this study, was employed to evaluate athletes' performance. The quasi-

experimental research unfolded in three stages: baseline, intervention, and evaluation, utilizing a 2x2x2 factorial design. Factors considered included sports background (professional sportsmen vs. non-sportsmen), achievement motivation levels (low vs. high), and participation in motivational training (training vs. no-training). SPSS version 26 facilitated a comprehensive statistical analysis, applying parametric statistics after screening and handling outliers. Descriptive statistics and reliability tests, including Cronbach's alpha, were used for internal consistency and variable characterization. Pearson's product-moment correlation coefficient examined interrelationships among self-regulation, achievement motivation, and self-efficacy. The primary analysis involved a three-way analysis of covariance (ANCOVA), with pre-test measures as covariates, and post hoc Scheffe tests to assess group differences. Due to non-parametric assumptions for the General Self-Efficacy Scale, alternative tests such as the Mann-Whitney U-test, Wilcoxon signed-rank test, Kruskal-Wallis test, and Steel-Dwass test were also conducted.

The results presented in Figure 1 illustrate the distribution of participants based on the sport and non-sport groups in the study; Figure 2 displays the distribution of participants based on the training and no-training groups; and Figure 3 displays the gender distribution among the study participants. As seen from Figure 1, the non-sport group is in the majority, contributing 64.72% of the sample, while the sport group consists of 35.28% of the sample. The no-training group consists of 54.52% of the sample, and the training group consists of 45.48% of the sample (Figure 2). From Figure 3, it can be seen that from the sample (N = 323), males constituted 51.6%, while females made up 48.4% of the sample, respectively.

Figure 1

Distribution of Groups (Sport Non-sport) under study

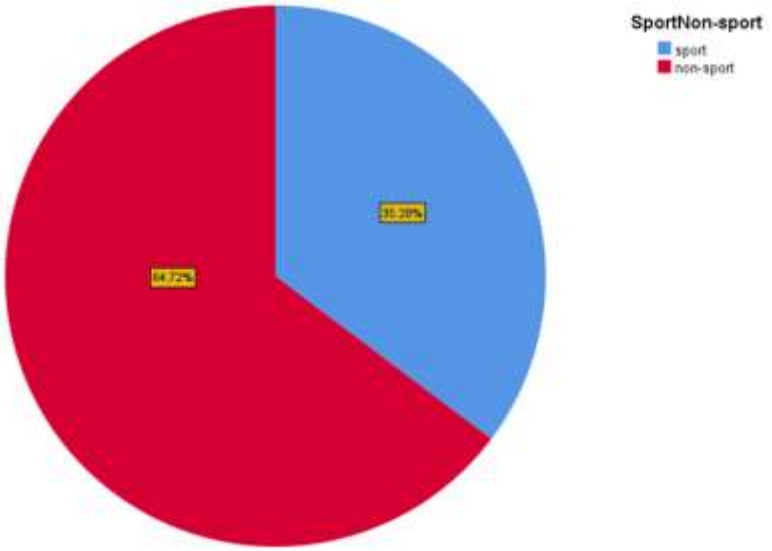


Figure 2

Distribution of Trainees (Training- No-Training) under study

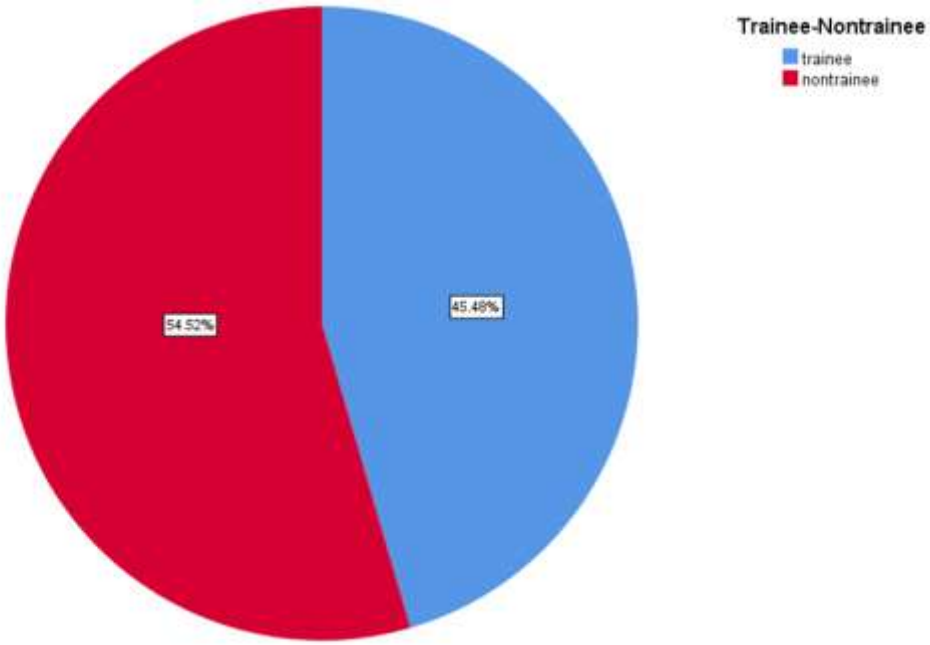


Figure 3

Distribution of Gender of the participants under study

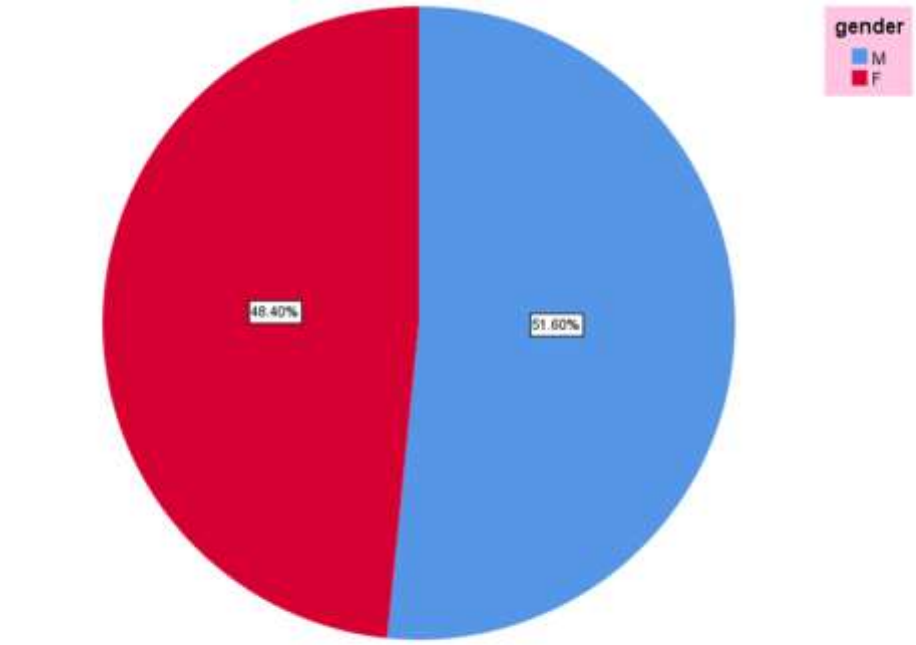
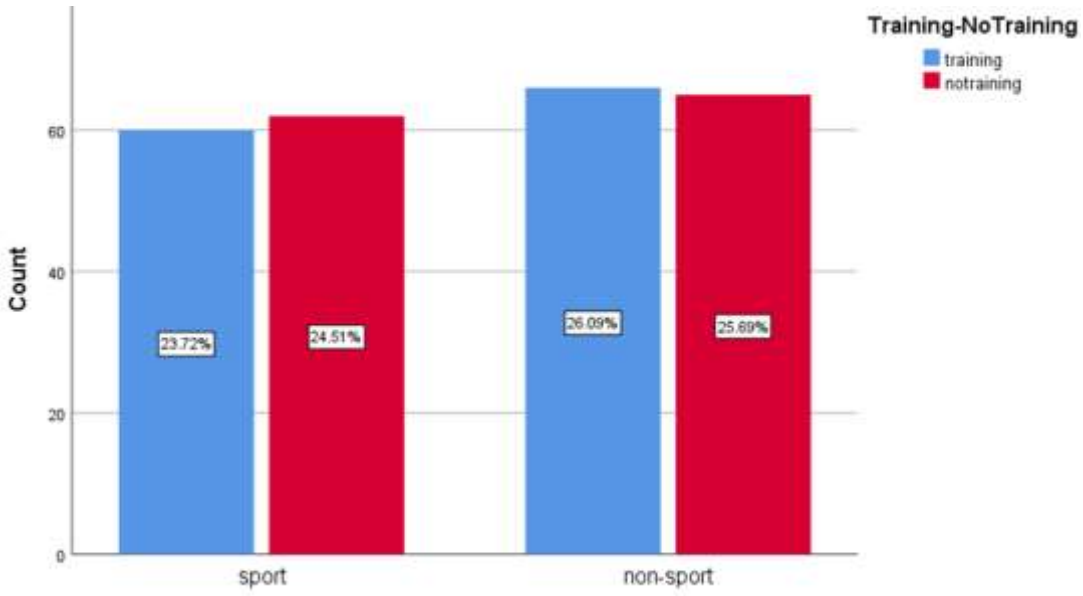


Figure 4

Distribution of Training groups under study



The distribution of sport and non-sport groups into training and no-training is portrayed in Figure 4. Among the non-sport participants who did not receive training, they accounted for 25.69% of the sample. In contrast, non-sport participants who received training constituted 26.09% of the sample. For the sport group, those who did not receive training comprised 24.51%, while those who received training comprised 23.72% of the total sample.

Table 1a

Descriptive Statistics for Achievement Motivation (Pre-test) with reliability

Variable	**Group**		**M**	**SD**	**Skewness**		**Kurtosis**		**Range of item-total correlation**	**Cronbach's Alpha**
					Stat	SE	Stat	SE		
HOS	Training	1	16.74	1.8	0.06	0.26	-0.83	0.5	(.29-.54)	0.64
		2	16.89	2.05	-0.26	0.19	-0.43	0.4	(.29-.56)	0.69
	No-Training	3	16.98	1.74	-0.05	0.26	-0.39	0.5	(.23-.50)	0.64
		4	16.56	1.87	0.23	0.2	-0.7	0.4	(.36-.46)	0.65
FOF	Training	1	14.26	2.9	-0.49	0.26	0.52	0.5	(.30-.50)	0.62
		2	15.05	2.73	-0.41	0.2	0.01	0.4	(.35-.45)	0.64
	No-Training	3	13.71	2.77	0.15	0.26	-0.27	0.5	(.32-.52)	0.67
		4	14.98	2.49	0.03	0.2	-0.38	0.4	(.25-.48)	0.65

Table 1a shows the descriptive statistics of all the subscales for achievement motivation (pre-test) with reliability. The table shows the mean, SD, skewness, kurtosis, range of items, total correlation, and reliability coefficients (Cronbach's alphas) of each scale or subscale. The skewness and kurtosis were checked at 3x the standard error, and they were found to be satisfactory for all subscales. The reliability coefficients (Cronbach's alpha) ranged between .62 and .69 over all the levels of analysis, i.e., training, no training, sport, and non-sport.

Table 1b

Variable	Group		M	SD	Skewness		Kurtosis		Range of item-total correlation	Cronbach's Alpha
					Stat	SE	Stat	SE		
HOS	Training	1	17.27	2.1	-0.93	0.26	1.32	0.52	(.44-.72)	0.79
		2	16.99	2.1	-0.24	0.19	-0.84	0.38	(.36-.52)	0.71
	No-Training	3	16.71	2	-0.91	0.26	3.41	0.52	(.30-.49)	0.61
		4	15.93	2.1	0.2	0.2	-0.34	0.39	(.33-.64)	0.72
FOF	Training	1	13.48	3.1	-0.43	0.26	-0.13	0.52	(.40-.65)	0.73
		2	14.42	3.2	-0.66	0.19	0.19	0.38	(.26 -.52)	0.66
	No-Training	3	13.69	2.8	0.35	0.26	-0.11	0.52	(.20-.52)	0.65
		4	14.53	2.4	0.4	0.2	-0.18	0.39	(.20-.46)	0.58

Descriptive Statistics for Achievement Motivation (Post-test) with reliability

Table 1b shows the descriptive statistics of all the subscales for achievement motivation (post-test) with reliability. The table shows the mean, SD, skewness, kurtosis, range of items, total correlation, and reliability coefficients (Cronbach's alphas) of each scale or subscale. The skewness and kurtosis were checked at 3x the standard error, and they were found to be satisfactory for all subscales. The reliability coefficients (Cronbach's alpha) ranged between .58 and .79 over all the levels of analysis, i.e., training, no training, sport, and non-sport.

Table 1c

Descriptive Statistics for General Self- Efficacy (Pre-test & Post-test) with reliability

Variable	Group		M	SD	Skewness		Kurtosis		Range of item-total correlation	Cronbach's Alpha
					Stat	SE	Stat	SE		
GSE pre-test	Training	1	27.87	4.6	0.27	0.26	-0.46	0.52	(.20-.60)	0.73
		2	27.49	5.1	0.25	0.19	-0.19	0.38	(.32-.59)	0.8
	No-Training	3	28.85	4.2	0.03	0.26	-0.86	0.52	(.33-.62)	0.82
		4	26.75	4.2	0.36	0.2	0.34	0.39	(.23-.61)	0.81
GSE post-test	Training	1	29.8	5.1	0.15	0.26	-0.61	0.52	(.28-.63)	0.8
		2	28.28	5.3	0.29	0.19	-0.66	0.38	(.38 -.60)	0.81
	No-Training	3	28.69	4.2	0.13	0.26	-0.57	0.52	(.20-.54)	0.74
		4	26.93	4.1	-0.1	0.2	-0.29	0.39	(.22-.63)	0.8

Table 1c shows the descriptive statistics of all the subscales of the General Self-Efficacy Scale (pre-test and post-test) with reliability. The table shows the mean, SD, skewness, kurtosis, range of items, total correlation, and reliability coefficients (Cronbach's alphas) of each scale or subscale. The skewness and kurtosis were checked at 3x the standard error, and they were found to be satisfactory for all subscales. The reliability coefficients (Cronbach's alpha) ranged between .73 and .83 for the GSE pre-test and .74 and .81 for the GSE post-test over all the levels of analysis, i.e., training, no training, sport, and non-sport.

Table 1d

Descriptive Statistics for Self-Regulation (Pre-test & Post-test) with reliability

Variable	Group		M	SD	Skewness		Kurtosis		Range of item-total correlation	Cronbach's Alpha
					Stat	SE	Stat	SE		
HOS	Training	1	17.27	2.1	-0.93	0.26	1.32	0.52	(.44-.72)	0.79
		2	16.99	2.1	-0.24	0.19	-0.84	0.38	(.36-.52)	0.71
	No-Training	3	16.71	2	-0.91	0.26	3.41	0.52	(.30-.49)	0.61
		4	15.93	2.1	0.2	0.2	-0.34	0.39	(.33-.64)	0.72
FOF	Training	1	13.48	3.1	-0.43	0.26	-0.13	0.52	(.40-.65)	0.73
		2	14.42	3.2	-0.66	0.19	0.19	0.38	(.26 -.52)	0.66
	No-Training	3	13.69	2.8	0.35	0.26	-0.11	0.52	(.20-.52)	0.65
		4	14.53	2.4	0.4	0.2	-0.18	0.39	(.20-.46)	0.58

Table 1d shows the descriptive statistics of all the subscales of the Self-Regulation Scale (pre-test and post-test) with reliability. The table shows the mean, SD, skewness, kurtosis, range of items, total correlation, and reliability coefficients (Cronbach's alphas) of each scale or subscale. The skewness and kurtosis were checked at 3x the standard error, and they were found to be satisfactory for all subscales. The reliability coefficients (Cronbach's alpha) ranged between .66 and .81 for the GSE pre-test and .61 and .80 for the GSE post-test over all the levels of analysis, i.e., training, no training, sport, and non-sport.

The mean and SD of the Achievement Motive Scale, General Self-Efficacy Scale, and Self-Regulation Scale of the present study were compared with the mean and SD of the original tools/scales scores (Table 1e). The original version of the scales showed higher levels of scores on the selected variables compared to the translated version of the scales.

Table 1e

*Mean and Standard deviation of all the variables in comparison with the original tool by the author***.**

Variables/scales	Sub-scales	Mean	S. D	Mean (original scale score)	S.D (original scale score)
Achievement Motivation Scale	Hope of success (Male)	16.93	2.41	16.61	1.86
	Hope of success (Female)	17.06	2.36		
	Fear of failure (Male)	10.80	3.46	14.48	2.54
	Fear of failure (Female)	11.64	3.40		
General Self-efficacy scale		29.59	5.29	27.16	4.20
Self-regulation scale		28.98	4.79	22.68	3.24

Table 2a

Bivariate correlation matrix between demographic variables (age, gender, parent's marital status, residence, number of family members, family income) and psychological measures (Hope of Success, Fear of Failure, General Self-Efficacy, Self-Regulation) in the overall sample

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Age	X													
2. Gender	.02	X												
3. Parents Marital Status	.03	-.06	X											
4. Residence	.00	.04	-.04	X										
5. Family Member	-.01	.04	.05	.23**	X									
6. Family Income	-.19**	-.03	.04	.14*	.07	X								
7. Hopeofsuccess	.11*	-.04	.05	.01	-.04	.07	X							
8. Fearoffailure	-.12*	.27**	.03	-.03	.05	.00	.07	X						
9. Generalselfefficacy	.03	-.18**	-.03	.04	-.05	-.01	.39**	-.16**	X					
10. Selfregulation	.04	-.19**	-.06	.09	.00	-.02	.17**	-.31**	.52**	X				
11. Hopeofsuccesspost	.02	-.08	.03	.02	.01	.10	.71**	.06	.41**	.21**	X			
12. Fearoffailurepost	-.11	.24**	.04	-.01	.00	.03	.10	.75**	-.12*	-.27**	.11*	X		
13. Generalselfefficacypost	.03	-.30**	-.05	.02	-.07	-.03	.35**	-.16**	.81**	.49**	.46**	-.15**	X	
14. Selfregulationpost	.04	-.19**	-.01	.05	.01	-.03	.15**	-.33**	.49**	.84**	.21**	-.32**	.55**	X

*p<.05 **p<.01

Table 2b

Bivariate correlation matrix between demographic variables (age, gender, parent's marital status, residence, number of family members, family income) and psychological and performance measures (Hope of Success, Fear of Failure)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. age	x														
2. gender	-.28**	X													
3. parents marital status	0.12	-0.17	X												
4. chenna in	-0.15	.256**	-0.08	x											
5. family member	0.17	-0.06	.23*	0.13	X										
6. family income	.30**	-0.02	0.12	0.06	0.05	X									
7. HopeOfSuccess	0.17	-0.15	-0.02	-0.16	-0.06	0.07	X								
8. FearOfFailure	-0.06	0.16	-0.06	-0.01	0.03	-0.05	0.16	X							
9. GeneralSelfEfficacy	-0.10	-0.09	-.18*	-0.12	-0.13	0.02	.32**	-.22*	X						
10. SelfRegulation	-0.07	-.30**	-0.08	-0.14	-0.04	-.18*	0.09	-.33**	.54**	X					
11. HopeOfSuccessPOST	0.14	-0.07	-0.01	-0.08	-0.03	0.13	.70**	0.16	.33**	0.1	X				
12. FearOfFailurePOST	-0.03	0.04	-0.01	-0.03	-0.07	0.09	0.11	.75**	-.19*	-.33**	0.15	X			
13. GeneralSelfEfficacyPOST	-0.08	-0.10	-0.13	-0.12	-0.08	-0.01	.32**	-0.11	.83**	.46**	.44**	-0.12	X		
14. SelfRegulationPOST	-0.09	-.26**	-0.02	-0.15	0.01	-0.16	0.06	-.28**	.49**	.83**	0.11	-.32**	.51**	X	
15. Performance Pre	-0.16	0.04	-0.14	0.03	-0.10	-0.08	0.11	-0.17	.29**	.33**	0.10	-0.11	.26**	.26**	x
16. Performance post	.23*	-0.07	-0.01	-0.07	0.03	0.18	0.14	0.04	0.00	0.02	0.09	0.00	0.06	0.05	.3**

*p<.05 **p<.01

General Self-Efficacy, Self-Regulation, and Performance) in the sports sample.

The bivariate correlation matrix was conducted to explore the relationships between demographic variables (age, gender, marital status, residence, family size, and family income) and psychological measures in the overall sample. This analysis aims to understand how these demographic factors are associated with various psychological aspects, providing valuable insights into potential connections and influences within the studied population.

As seen in Table 2a, between demographic variables, residence showed a significant positive correlation with family size and family income. Age showed a negative correlation with family income.

Between demographic variables and psychological measures, age had a positive correlation with hope of success and a negative correlation with fear of

failure. Gender was positively correlated with fear of failure and negatively correlated with self-efficacy and self-regulation in both pre-test and post-test assessments.

Regarding psychological measures, consistent positive relationships were found among pretest and post-test scores of general self-efficacy, self-regulation, and hope of success. Fear of failure showed a significant negative correlation with self-efficacy and self-regulation in both pretest and post-test assessments.

Between demographic variables, psychological measures, and the performance of the sportsmen, age was positively correlated with post-test performance. Pretest performance showed positive correlations with self-efficacy and self-regulation in both pre-test and post-test evaluations (Table 2b).

Table 3

U Test – Mann Whitney for Groups, Training and Achievement Motivation on

		U	Z	Sig
Groups	GSE pre	7146	-1.46	.145
	GSE post	5930	-3.55	.000*
Training	GSE pre	7622.50	-.65	.514
	GSE post	7681	-.55	.582
LAM HAM	GSE pre	4154	-6.63	.000*
	GSE post	4968.5	-5.22	.000*

* $p < .05$

General Self-Efficacy

The result (Table 3) revealed a significant difference in general self-efficacy (GSE) post-test between sport and non-sport groups. On the general self-efficacy post-test, the sport group had a higher mean rank (*Mean Rank* = 143.89) compared to the non-sport group (*Mean Rank* = 111.27). There were significant differences in both GSE pre-test and GSE post-test scores between individuals with Low Achievement Motivation (LAM) and High Achievement Motivation (HAM). For both the general self-efficacy pre-test and post-test, the High Achievement

Motivation (HAM) group had higher mean ranks (*Mean Rank* = 157.29, *Mean Rank* = 150.88) compared to the Low Achievement Motivation (LAM) group (Mean Rank = 96.47, Mean Rank = 102.93).

Table 4

Wilcoxon Signed Rank Test for General Self-Efficacy Pre-test Post-test for each cell

Groups	Training	Achievement Motivation	Ranks	N	Mean Rank	Sum of Ranks	Z	Sig.
Sport	Training	Low	Negative	5	7.70	38.50	-3.35	.001**
			Positive	20	14.33	286.50		
			Ties	4				
			Total	29				
		High	Negative	9	8.67	78.00	-2.85	.004**
			Positive	19	17.26	328.00		
			Ties	3				
			Total	31				
	No-Training	Low	Negative	8	9.13	73	-1.749	.080
			Positive	14	12.86	180		
			Ties	8				
			Total	30				
		High	Negative	14	11.71	164	-.296	.768
			Positive	12	15.58	187		
			Ties	6				
			Total	32				
Non-sport	Training	Low	Negative	7	9.79	68.5	-.744	.457
			Positive	11	9.32	102.5		
			Ties	14				
			Total	32				
		High	Negative	13	12.69	165	-.578	.563
			Positive	14	15.21	213		
			Ties	7				
			Total	34				
	No-Training	Low	Negative	9	11.56	104	-1.583	.113
			Positive	16	13.81	221		
			Ties	10				
			Total	35				
		High	Negative	15	14.2	213		
			Positive	13	14.85	193	-.229	.819
			Ties	2				
			Total	30				

** p<.01

of the main design

Table 4 aims to examine the impact of motivational training on self-efficacy levels within the sports and non-sports groups, considering participants who are trained and not trained, and further distinguishing between individuals with Low Achievement Motivation (LAM) and High Achievement Motivation (HAM). By conducting the Wilcoxon Signed Rank Test, the table explores whether motivational training has a significant influence on self-efficacy outcomes across these different subgroups. The table showed significant differences in the general self-efficacy scores between the pre-test and post-test for both the sports training group with Low Achievement Motivation and the sports training group with High Achievement Motivation. In both groups, regardless of their achievement and motivation levels, the post-test scores were significantly higher than the pre-test scores, indicating the influence of motivational training on the participants.

No significant differences were found in general self-efficacy scores between the pre-test and post-test conditions for the sports no-training groups and non-sports training and no-training groups, categorized by both Low and High Achievement Motivation. These results indicate that the self-efficacy levels of participants in these groups remained relatively stable following the study, regardless of their Achievement Motivation levels.

Table 5a

The outcome for Kruskal Wallis test statistics for the 'Groups x Training', 'Groups x Achievement Motivation', 'Training x Achievement Motivation' and the'Groups x Training x Achievement Motivation' on the General Self-efficacy Pre-test and Post-test

Group	Self-efficacy	H	Sig.
Groups x Training	Self-efficacy Pre-test	5.276	.153
	Self-efficacy Post-test	8.371	.039*
Groups x Ach M	Self-efficacy Pre-test	49.109	.00**
	Self-efficacy Post-test	41.593	.00**
Training x Ach M	Self-efficacy Pre-test	5.276	.153
	Self-efficacy Post-test	8.371	.039*
Groups vs Training x Ach M	Self-efficacy Pre-test	52.214	.00**
	Self-efficacy Post-test	41.849	.00**

* p < .05 ** p< .01

Kruskal Wallis One Way ANOVA along with the Steel-Dwass test as a non-parametric comparison was employed to elucidate the pattern of differences in the interaction between 'Groups x Training', 'Groups x Achievement Motivation', 'Training x Achievement Motivation' and the higher-order interaction effects of 'Sports x Training x Achievement Motivation'.

The results (Table 5a) revealed a significant interaction effect between Groups x Training on self-efficacy post-test, 'Groups x Achievement Motivation' on self-efficacy pre-test and post-test, 'Training x Achievement Motivation' on self-efficacy post-test, and the three-way interaction effect of 'Groups x Training x Achievement Motivation' on self-efficacy pre-test.

Table 5b

Steel-Dwass Test for the significant interaction effect of 'Groups x Training' on Self-

		Rank Means	1	2	3	4
Sport	1. Training	146.11				
	2. No- training	141.75	0.43			
Non-sport	3. Training	114.48	2.43	2.13		
	4. No- training	108.01	2.81*	2.67*	0.53	

* (P<=0.05) ** (P<=0.01) *** (P<=0.001)

efficacy Post-test

The result (Table 5b) revealed significantly higher mean ranks for training and no-training sports participants as compared to non-sports participants with no training.

Table 5c

Steel-Dwass Test for the significant interaction effect of 'Groups x Achievement

		Rank Means	1	2	3	4
Sport	1. Low Ach Motivation	111.98				
	2. High Ach Motivation	154.48	-3.23**			
Non-sport	3. Low Ach Motivation	82.80	2.36	5.43***		
	4. High Ach Motivation	160.06	-3.75**	-0.29	-6.08***	

** (P<=0.01) *** (P<=0.001)

Motivation' on Self- efficacy Pre-test

The results (Table 5c) highlighted the Steel-Dwass Test for the significant interaction effect of 'Groups x Achievement Motivation' on self-efficacy Pre-test, revealing that sport and non-sports participants with High Achievement Motivation showed significantly greater mean ranks as compared to sports and non-sports participants with Low Achievement Motivation.

Table 5d

Steel-Dwass Test for the significant interaction effect of 'Groups x Achievement Motivation' on Self- efficacy Post-test

		Rank Means	1	2	3	4
Sport	1. Low Ach Motivation	28				
	2. High Ach Motivation	29	-2.48			
Non-sport	3. Low Ach Motivation	25	3.69**	5.94***		
	4. High Ach Motivation	29	-1.17	1.29	-4.83***	

** (P<=0.01) *** (P<=0.001)

The results (Table 5d) highlighted the Steel-Dwass Test for the significant interaction effect of 'Groups x Achievement Motivation' on self-efficacy post-test, revealing that significantly higher mean ranks were observed for both sports with low and High Achievement Motivation and non-sports with High Achievement Motivation as compared to non-sports participants with Low Achievement Motivation

Table 5e

Steel-Dwass Test for the significant interaction effect of 'Training x Achievement Motivation' on Self- efficacy Post-test

		Rank Means	1	2	3	4
Low Ach Motivation	1. Training	106.11				
	2. No-Training	99.95	0.53			
High Ach Motivation	3. Training	151.53	-3.45**	-3.91***		
	4. No-Training	150.19	-3.43**	-3.93***	-4.83	0.25

** (P<=0.01) *** (P<=0.001)

The Steel-Dwass Test (Table 5e) for the significant interaction effect of 'Training x Achievement Motivation' on self-efficacy Post-test revealed significantly higher mean ranks for High Achievement Motivation with both training and no-training participants as compared to Low Achievement Motivation with both training and no-training participants.

Table 5f

Steel-Dwass Test for the significant interaction effect of 'Groups x Training x Achievement Motivation' on Self- efficacy Pre-test

Groups	Training	Ach M	Rank Means	1	2	3	4	5	6	7	8
Sport	Training	1.Low	101.64	-							
		2.High	142.81	-2.10	-						
	No-Training	3.Low	121.98	-1.27	1.18	-					
		4.High	165.78	-3.43*	-1.35	-2.38					
Non-Sport	Training	5.Low	88.63	0.74	2.86	2.03	3.94**				
		6.High	159.20	-3.05*	-0.76	-2.23	0.54	-3.96**			
	No-Training	7.Low	77.49	1.29	3.66**	2.53	4.78**	0.38	4.82**		
		8.High	161.03	-3.04*	-0.99	-2.28	0.33	-3.63**	-0.19	-4.66**	-

* (P<=0.05) ** (P<=0.01)

The Steel-Dwass Test (Table 5f) for the significant interaction effect of 'Groups x Training x Achievement Motivation' on self-efficacy Pre-test revealed significantly higher mean ranks for both non-sport training and no-training with High Achievement Motivation (HAM) and sport no-training with High Achievement motivation (HAM) as compared to sport training and non-sport training and no-training with Low Achievement Motivation. Also, sport training with HAM revealed significant greater mean rank compared to non-sport no-training with LAM

Table 5g

Steel-Dwass Test for the significant interaction effect of 'Groups x Training x Achievement Motivation' on Self- efficacy Post-test

Groups	Training	Ach M	Rank Means	1	2	3	4	5	6	7	8
Sport	Training	1.Low	129.69	-							
		2.High	161.47	-1.77							
	No-Training	3.Low	125.68	0.30	2.03						
		4.High	156.81	-1.47	0.33	-1.73					
Non-Sport	Training	5.Low	84.73	2.43	4.04**	2.48	4.00**				
		6.High	142.47	-0.62	1.05	-1.04	0.66	-3.19*			
	No-Training	7.Low	77.9	2.73	4.34**	2.75	4.34**	0.78	3.42*		
		8.High	143.13	-0.69	1.09	-0.94	0.87	-3.29*	0.04	-3.73**	-

* (P<=0.05) ** (P<=0.01) *** (P<=0.001)

The Steel-Dwass Test (Table 5g) for the significant interaction effect of 'Groups x Training x Achievement Motivation' on self-efficacy Post-test revealed significantly greater mean ranks for both sport training and no-training, and non-sport training and no-training with High Achievement motivation (HAM) as compared to non-sport training and no-training with Low Achievement Motivation (LAM).

Table 6a

Three-Way Analysis of Covariance (ANCOVA) Results: Effects of Groups, Training, and Motivation on Self-Regulation, Controlling for Self-Regulation Pretest as a

Source	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Observed Power
Self-regulation	1389.60	1	1389.60	203.110	.000**	.45	1.00
Groups	83.29	1	83.29	12.17	.001**	.05	.93
Training	13.24	1	13.24	1.94	.165	.01	.28
Ach Motivation	4.74	1	4.74	.69	.406	.00	.13
Groups * Training	63.10	1	63.10	9.35	.002**	.04	.86
Groups * Ach Motivation	6.90	1	6.90	1.01	.317	.00	.17
Training * Ach Motivation	.17	1	.17	.02	.877	.00	.05
Groups * Training * Ach Motivation	.62	1	.62	.09	.764	.00	.06
Error	1669.35	244	6.84				
Total	3469.75	252					

**p < .01

Covariate

The results (Table 6a) highlighted the independent and interaction effects of Groups, Training, and Motivation on Self-Regulation for the series of three-way analysis of covariance with the pre-test as the covariate. The results (Table 4c) revealed a significant independent effect of 'Groups' and a significant interaction effect of 'Sport x Training' on Self-regulation. The closer examination of the significant independent effect of 'Groups' revealed the sports group (M = 23.79; SD = 3.51) to show a greater mean score in self-regulation compared to those in the non-sports group (M = 22.21; SD = 3.74) and is depicted in Figure 5.

Figure 5

Plot of means for the significant effect of 'Groups' on Self-regulation

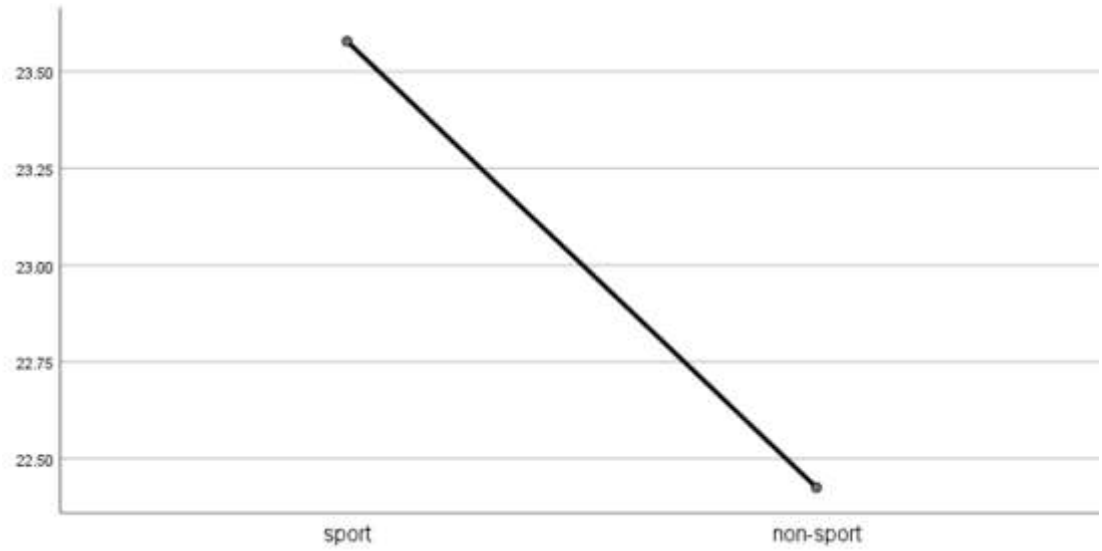


Table 6b

Scheffe test for the significant interaction of 'Groups x Training' on Self-Regulation

Groups	Training	Means	1	2	3	4
Sport	1.Training	24.30	X			
	2.No-training	23.40	0.9	X		
Non-sport	3.Training	21.88	2.42*	1.52**	X	
	4.No-training	22.54	1.76*	0.86	-0.66	X

* $p < .05$

The Scheffe test was conducted to examine the significant interaction of Groups x Training on self-regulation. The results (Table 6b) revealed a greater mean for sport training as compared to non-sport training and without training. Also, sport without training showed a higher mean rank compared to non-sport with training.

Table 7

Two-Way Analysis of Covariance (ANCOVA) Results: Effects of Training, and Achievement Motivation on Performance, Controlling for Performance Pretest as a Covariate

Source	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Observed Power
Performance	307.26	1	307.26	25.457	.000	.18	.99
Training	799.15	1	799.15	66.21	.000*	.36	1.00
Ach Motivation	32.88	1	32.88	2.72	.102	.02	.37
Training * Ach Motivation	3.11	1	3.11	.26	.613	.00	.08
Error	1412.19	117	12.070				
Total	2602.04	121					

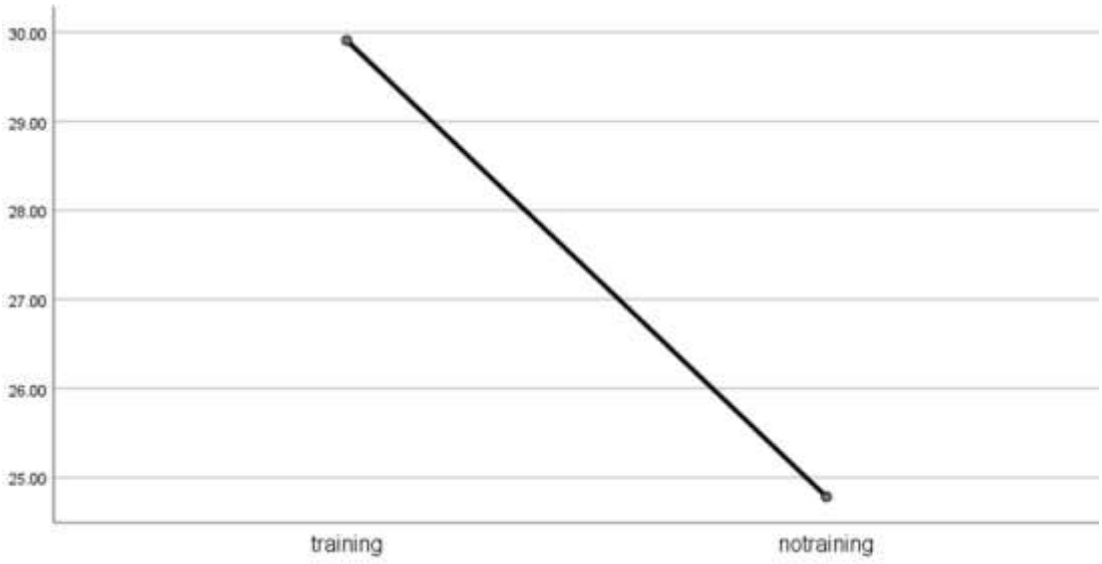
*p < .05

The results (Table 7) highlighted the independent and interaction effects of training and achievement motivation on performance for the series of two-way analysis of covariance with the pre-test as the covariate. The pre-test scores of performances showed a significant effect on the post-test scores of performance with

a reasonably high effect size. The results revealed a significant independent effect of 'Training' on performance. The closer examination of the significant independent effect of 'Training' revealed the training (M = 29.93; SD = 3.83) to show a greater mean score in performance compared to those in the no-training group (M = 24.80; SD = 3.91) and is depicted in Figure 6.

Figure 6

Plot of means for the significant effect of 'Training' on Performance



Chapter – V

DISCUSSION

The study to investigate the impact of motivational training on self-efficacy, self-regulation, and performance of professional sportsmen was carried out in Mizoram, India. It consisted of a translation process where English psychological tools were translated into the native language, Mizo. The purpose of this translation process was to ensure linguistic consistency. The General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995), the Achievement Motives Scale (Lang & Fries, 2006), and the Self-Regulation Scale (Schwarzer et al., 1999) were among the psychological tools used in the translated version. A total of 323 young adults, ranging in age from 13 to 30, residing in Mizoram, participated in this research.

The subsequent step, following the translation process, was to develop a sport performance index that was tailored particularly to the athletes involved in the research. Consequently, the quasi-experimental study was implemented, comprising a total of three phases: baseline, intervention, and evaluation. In order to examine the impacts of motivational training, a 2x2x2 factorial design was employed, which accounted for variables including athletic background (professional athletes versus non-athletes), level of achievement motivation (low versus high), and participation in motivational training (training versus no-training). The objective of the study was to examine how these factors interacted with regard to self-efficacy, self-regulation, and performance.

The collected data were subjected to a comprehensive statistical analysis using Statistical Package for Social Sciences (SPSS) version 26. Descriptive statistics were employed to characterize the variables under study, incorporating measures such as mean, standard deviation, skewness, and kurtosis. Cronbach's alpha analyses were conducted in order to ascertain the internal consistency of the variables under study. Pearson's product-moment correlation coefficient was utilized to explore the relationships between demographic variables, achievement motivation, self-efficacy, self-regulation, and performance.

The primary analysis involved a three-way analysis of covariance (ANCOVA) to examine the impact of the motivational training program on self-

efficacy, self-regulation, and performance. Pre-test assessments of self-efficacy, self-regulation, and performance were used as covariates. Additional post-hoc Scheffe tests were performed to identify group-specific differences. Furthermore, alternative statistical tests were conducted in consideration of the non-parametric assumptions underlying the General Self-Efficacy Scale. These tests comprised the Mann-Whitney U-test, Wilcoxon signed-rank test, Kruskal-Wallis test, and Steel-Dwass test. These analyses collectively aimed to determine the effectiveness of the motivational training on the athletes' psychological and performance outcomes.

Overall, the study contributed to a better understanding of the function of motivational training in improving self-efficacy, self-regulation, and performance among professional athletes in Mizoram, India. The present study aimed to investigate the impact of motivational training on the self-efficacy, self-regulation, and performance of Mizoram professional sportsmen. The objectives of the study were framed to address specific aspects of this impact and to explore relationships between key psychological variables. The theoretical framework underpinning the research provided a foundation for analyzing the results in the context of established theories in sport psychology. The following sections provide a comprehensive discussion of the findings and their implications.

Levels of the participant's self-efficacy, self-regulation, and achievement motivation.

Levels of Self-Efficacy

The General Self-Efficacy Scale (GSE) assesses a general sense of perceived self-efficacy with the aim of predicting coping with daily hassles as well as adaptation after experiencing all kinds of stressful life events (Schwarzer & Jerusalem, 1995). An optimistic self-belief is reflected in this concept of perceived self-efficacy (Schwarzer, 1992). In the broad spectrum of human functioning, this is the belief that one is capable of accomplishing challenging or unfamiliar activities or overcoming adversity. Perceived self-efficacy facilitates goal-setting, effort

commitment, perseverance in the face of obstacles, and failure recovery. It can be viewed as a helpful restraint for effective resistance (Schwarzer & Jerusalem, 1995).

The mean self-efficacy scores vary slightly among the data obtained from the original and translated versions. Notably, the original version had a slightly higher mean in comparison to the translated version. Conversely, the translated tool, conducted specifically within the Mizo population in Mizoram, yielded slightly lower mean self-efficacy scores compared to the original version. The differences in mean scores could suggest potential variations in participants' self-efficacy perceptions between the original and translated versions. This discrepancy could be influenced by various factors unique to the Mizo context, such as cultural nuances, translation complexities, and the influence of Mizo-specific participant characteristics within Mizoram. The translation process might not have fully captured the intricacies of self-efficacy perceptions within the Mizo culture in Mizoram, leading to variations in how Mizo participants understood and responded to the items. Furthermore, participants' demographic characteristics and life experiences within the Mizo community in Mizoram might have contributed to the observed differences in mean scores.

Jurecska, Lee, Chang, and Sequeira (2011), in their study, also highlighted how the effects of cultural orientations can shape an individual’s perception of their self-efficacy. When considering the context of the Mizo population, which resides in a collectivistic society, it becomes crucial to acknowledge the potential differences in the concept of self-efficacy. As the original tool's study was not conducted within Mizoram, it might not fully encapsulate the intricacies of self-efficacy as perceived by individuals within a collectivistic society. The notion of self-efficacy could indeed manifest differently in a culture that places greater emphasis on community cohesion and interdependence. The Mizo society is focused on working together, which could mean that self-efficacy is affected by things other than an individual's skills. For example, Ahn, Usher, Butz, and Bong (2016) found that students from an individualistic society scored higher on a certain aspect of self-efficacy compared to students from a collectivistic society. In a collectivistic society like the Mizo

community, where working together is important, socially conveyed stances of self-efficacy information might be more influential. This may help to explain why Mizo people scored lower on self-efficacy tests because of the influence of their close-knit culture on their perceptions of their own abilities.

The original scale version displayed higher variability in standard deviations due to its broad application. In contrast, the translated version showed lower standard deviations, indicating stronger consistency among Mizo participants. The lower standard deviation in the translated version's scores indicated that participants' responses were somewhat more consistent when using the translated one. This coherence could stem from effective cultural alignment during translation within the Mizo population in Mizoram. This observation resonates with Jurecska et al.'s (2011) study, emphasizing cultural orientations' impact on self-efficacy perceptions. Cultural backgrounds shape how individuals view their self-efficacy, suggesting that Mizo's collectivistic society may lead to distinct self-efficacy interpretations, influenced by communal dynamics. This sense of togetherness might lead them to have more consistent beliefs about their abilities.

Levels of self-regulation

The Self-Regulation Scale (SRS; Schwarzer et al., 1999)—original version and translated version (Mizo)—were used to examine the degree of self-regulation in the participants. It is a self-report questionnaire developed in Germany to assess attention control in goal pursuit. Notably, the original version displayed the highest mean self-regulation score between the two contexts. In contrast, the translated version exhibited a relatively lower mean score. These variations in mean scores could be attributed to the intricacies of translation and how cultural nuances influence participants' interpretations.

These factors and others may also have an impact on the standard deviations, which show the variability in self-regulation scores. The standard deviation was narrower in the translated data. The reason may be that Mizo participants exhibit greater consistency in their responses. This consistency likely stems from their

cultural and linguistic alignment, which fosters a shared understanding of the self-regulation construct. Kizilcec & Cohen (2017) conducted a study on the impact of an eight-minute self-regulation intervention, finding that its effectiveness varied between individualist and collectivist cultures. Similarly, in a study by Kurman (2001), cultural and gender differences in self-regulation were explored through a task involving choosing the difficulty level to maximize achievement. Singaporean and Israeli psychology students exhibited cultural disparities in their scores, with Israelis outperforming Singaporeans.

Furthermore, the age differences among the participant groups, as highlighted by Donorfio, D'Ambrosio, Coughlin, and Mohyde (2008), might also play a role in the observed discrepancies. The original version sampled young adults aged 19–39 years, whereas the translated version targeted participants aged 13–30 years. These varying age ranges could introduce differences in life experiences and developmental stages, contributing to the observed differences in self-regulation scores.

Levels of Achievement Motivation Scale (AMS-R) with Hope of Success and Fear of Failure as the sub-components

Sub-components of the Achievement Motivation Scale (AMS-R) are Fear of Failure and Hope of Success.

The results reveal that there are distinct patterns in the scores for Hope of Success (HOS) and Fear of Failure (FOF) among the various AMS-R scale versions. The original version showed the highest mean for HOS, suggesting that the participants had high achievement motivation and a reasonably strong sense of hope for success. On the other hand, the original version has the lowest mean for fear of failure, suggesting a relatively lower fear of failure among the same participants. One possible explanation is that the Mizo culture's collectivistic orientation, which values modesty and caution, may lead to a decrease in the display of high achievement motivation. The tool's translation process may also have failed to accurately capture the complex concepts of success and hope in the Mizo language, where emotions and meanings can differ across cultures. An intercultural study by Sagie et al. (1996) that

examined the achievement motive domain in five different countries—the United States, the Netherlands, Israel, Hungary, and Japan—found a similar trend of cultural influence on achievement motivation. Their study validated the theory that cultural orientations—individualist or collectivistic—have a major impact on motive strength. The results showed that respondents from individualistic American cultures had the highest achievement tendencies, whereas respondents from collectivistic Japanese and Hungarian cultures had the lowest.

Furthermore, because Mizo society is collective, overt expressions of ambitious hope may be discouraged for fear of coming across as arrogant or individualistic. Furthermore, the concept of "tlawmngaihna," deeply valued in Mizo culture, might contribute to individuals downplaying their hopes and aspirations. This cultural norm, known as "tlawmngaihna," reflects a compelling moral force that prioritizes self-sacrifice and the service of others (Chatterji, 1975). This altruism encompasses many facets of life, such as resource sharing, helping those with sickness, and community support. A preference for the group's well-being over personal goals may result from these cultural norms, which may lower HOS scores.

It's interesting to note that the AMS-R scale, with its Mizo language translation, which was adapted for the Mizo community, has the narrowest standard deviations for both fear of failure and hope of success. This narrower variability implies greater consistency in responses from the participants. A possible explanation for this constant pattern could be that the instrument was translated into the participants' native tongue, which improved their comprehension of the scale items and produced responses that were more precise. Furthermore, the translated version's lower standard deviations among the Mizo population may also point to the Mizo community's collectivistic nature, where members tend to share common values, beliefs, and behaviors, which promotes greater consistency in replies. The Mizo society's high emphasis on dependency and communal ties may be a factor in this trend.

It's also crucial to take into account the participants' different ages in the translated instrument (mean age 18.65) compared to the original tool (mean age

25.10). Their different ages may help to partially explain the observed differences in these groups' assessments of hope for success and fear of failure. This phenomenon aligns with findings from a study by Tamannaifar and Gandomi (2011), which discovered a correlation between age and achievement motivation. This pattern is also reflected in the results, where the translated tool—marked by the youngest average participant age—demonstrated the lowest levels of achievement motivation amongst the groups.

Thus, the present study in the Mizo population revealed variations in self-efficacy, self-regulation, and achievement motivation. The translated self-efficacy scores were slightly lower; self-regulation levels differed, with the original version showing higher means. Achievement motivation patterns were distinct, with the original version indicating stronger hope for success and a lower fear of failure. Responses were more consistent in the translated version. Top of Form

Relationship between demographic variables, self-efficacy, self-regulation, and performance for the overall samples

Relationship between demographic variables

The bivariate correlation matrix revealed a negative correlation between age and family income, suggesting that as people age, their family income tends to decline. Regional and economic factors may help to explain the inverse relationship between family income and age. It's possible that regional growth and economic factors have given younger people access to more earning prospects. As a result of past economic circumstances that affected their earning ability, elder participants may have a relatively lower family income (Lee, Cheong, Wu, & Wu, 2017).

The present study also revealed that living in one’s own residence is related to larger family sizes and higher family income. There are several possible reasons why people from higher-income and larger-family households want to be homeowners. A higher family income can give people the money they need to buy a house of their own. Larger families may also be able to invest in homeownership because of their higher combined income (Ceritoğlu, 2020). Higher-income families

could be more concerned with investments and stability over the long run. Thus, a home can be considered a significant asset for the future and a source of stability (Staszyńska & Zagórski, 2010). Larger families may need more space in the house to accommodate everyone, which makes owning a home more desirable than renting. Having their own home can provide the necessary space for a larger family (Hansen & Skak, 2008).

Relationship between demographic variables and psychological variables (self-efficacy, self-regulation, and achievement motivation—hope of success and fear of failure)

Relationship between demographic variables and psychological variables (self-efficacy, self-regulation, and achievement motivation—hope of success and fear of failure)

The findings revealed that older people have a higher level of hope for achieving their goals. Conversely, as people age, they generally encounter lower levels of fear related to potential failures. This is consistent with a study by Sagar and Jowet (2012), who found that junior female athletes experienced greater levels of fear than senior female athletes, suggesting that as athletes get older and gain more experience, their hope could increase.

As people get older, they've acquired a broader range of experiences—both successes and failures—which helps them view setbacks more objectively. The culmination of life experiences may have reduced the fear of failure by making defeats seem less intimidating and fostering hope for success. Furthermore, as individuals move through adolescence and into adulthood, their general self-esteem tends to rise (Orth & Robins, 2014). Their sense of self-worth may have reduced their fear of potential failure while simultaneously improving their confidence and hope for success. Also, research has indicated that accumulated life experiences also foster mastery and resilience in dealing with challenges (Lundman et al., 2007) and further become more adaptable, gaining a broader perspective on life. This increased adaptability and resilience may be one of the contributing factors to decreased

anxiety regarding possible failures, thereby bolstering hope for success and enhancing confidence.

As people age, the impact of peer pressure decreases because they become more self-reliant and less susceptible to outside approval. As the desire for validation from others decreases, so does the fear of failure (Monahan, Steinberg, & Cauffman, 2009). In line with these changes, older individuals frequently value internal growth, learning, and progress over seeking external validation. This shift in perspective may result in increased hope for success and decreased fear of failure, as failures are perceived as chances for growth rather than sources of shame. Furthermore, according to Inceoglu, Segers, and Bartram (2012), older people emphasize intrinsic goals like personal progress and fulfillment more than external ones. As the emphasis shifts from external evaluations to internal fulfillment, this intrinsic focus may lead to a reduced fear of failure.

In line with Ellison and Partridge's (2012) findings, the present study also revealed significant gender differences in fear of failure, with females reporting higher levels of fear compared to males. This was evident through significantly positive correlations observed in both pre-test and post-test assessments, supporting the notion that females tend to experience greater levels of fear related to potential failures than their male counterparts. Eisenberg, Martin, and Fabes (1996) and Harter (1998) reported similar results, indicating that girls had a tendency to develop more severe negative self-evaluations during adolescence. This is an essential point because it suggests that women might be more likely to internalize feelings of inadequacy and self-doubt. As a result of the substantial impact that this internalization may have on one's self-esteem, it may contribute to an increased fear of failure.

Research has shown that boys participate in "externalizing" behaviors like aggressiveness, while girls typically "internalize" their difficulties (Eisenberg et al., 1996). This is consistent with the view that women internalize failures and see them as a reflection of their own weakness, which heightens their fear of failure. Miller's (1985) claim that women are typically more "embarrassable" than men offers

additional insight. This suggests that women may be more fearful of events that could undermine their self-esteem because of their heightened sensitivity to possible embarrassment. Furthermore, the reference to Sagar et al.'s (2011) research strengthens the assumption that sex differences are evident in fear of losing the interest of important individuals and fear of undervaluing one's self-esteem. This provides further evidence that women may be more afraid of failing because they worry about how it will affect their relationships and self-esteem.

Biological factors could also play a role in the elevated fear of failure observed in females. According to Chen et al. (Year), hormonal fluctuations may have a significant role in females' greater fear and anxiety, which could account for their heightened fear of failure. The impact of estrogen on fear and anxiety-like behaviors, particularly in the amygdala, is highlighted in a study by Jasnow, Schulkin, and Pfaff (2006). This study provides insight into the biological basis for understanding how hormonal factors might contribute to the higher levels of fear of failure often observed in females.

In addition, the present study revealed that women had lower levels of self-efficacy skills than men. According to Bingcheng (2014), societal norms, gender roles, and cultural factors primarily shape the differences in self-efficacy beliefs between genders. Boys are frequently encouraged to show independence and confidence, which may support the growth of stronger self-efficacy. This is consistent with studies showing that men have higher levels of self-efficacy than women do (Rattanakoses et al., 2009; Shelangoski, 2013; Spence et al., 2010). The perception that boys possess greater abilities and responsibilities could further reinforce their stronger self-efficacy, which could explain why boys have higher self-efficacy compared to girls.

Furthermore, the current study found that women have lower levels of self-regulation skills than men. Gunzenhauser et al. (2017) found evidence in favor of the current findings about the advantages of male self-regulation. Boys showed higher levels of both behavioral self-regulation and executive functioning across the school year, according to their study on the development of self-regulation in German

primary school students. This supports the theory that men may demonstrate better self-control in specific situations. The behaviors and characteristics of boys and girls are greatly influenced by societal expectations and traditional gender roles. Boys are probably more adept at self-regulation than girls since they are frequently encouraged to be independent and assertive (Rosenberg & Simmons, 1975).

As previously stated, boys have higher levels of self-efficacy, which is the belief in one's ability to achieve goals. This self-belief can impact motivation and persistence in self-regulatory tasks, which may eventually be one of the contributing causes of higher levels of self-regulation. It is important to note that the heterogeneity in results across studies may be influenced by a variety of factors, including sample characteristics, study design, and so on. While the current study's findings diverge from those in earlier research, Sleeper and Nigro's (1987) study found a similar outcome.

Relationship between the psychological measures

The result of the study reveals that self-efficacy and self-regulation are negatively correlated with an individual's fear of failure. This suggests that individuals with higher levels of fear of failure might struggle with their self-efficacy and self-regulation abilities. Self-efficacy is frequently developed through experiences of mastery, such as accomplishing tasks successfully and setting objectives for mastering them (Meece et al., 1988). Fear of failure might prevent people from engaging in activities where they can succeed, perhaps missing out on opportunities to improve their self-efficacy.

According to Boekaerts & Corno (2005), people are best able to develop self-regulatory skills in an inspiring environment that emphasizes goal-setting and feedback. Past failures or perceived failures can create a negative feedback loop. Repeated failure can make people doubt their skills, which lowers their self-efficacy and self-regulation when taking on new tasks (Pintrich & Zusho, 2002). Furthermore, fear of failure is frequently linked to poor performance (Halvari & Tomassen, 1997; Sagar et al., 2010). Repeated failures might cause a condition known as "learned

helplessness." People can start to feel as though their efforts are in vain, which would lower their drive to practice self-regulation and their sense of self-efficacy. Stress and distress levels can rise when there is a persistent worry about failing (Gustafsson et al., 2017). Excessive levels of stress can affect cognitive abilities, making it more difficult to practice good self-regulation techniques like task prioritization and impulse control. Moreover, fear of failing frequently causes people to shy away from circumstances where failure is a possibility (Heckhausen, 1991). Because people may not fully engage in planning, preparation, or perseverance, this avoidance impairs self-regulation (Ertmer & Newby, 1996; Zimmerman, 2006).

The pretest and posttest of general self-efficacy, self-regulation, and hope of success show consistent positive relationships in all possible combinations. This implies that these constructs show a certain degree of stability over time and may even reinforce one another. Numerous studies in the field (Majzub & Yusuf, 2010; Duda & Nicholls, 1992; Elias et al., 2010; Kadhiravan, 2012) support the current findings. Self-efficacy beliefs, achievement motivation, and self-regulated learning strategies were found to be significantly correlated in Majzub and Yusuf's (2010) study on the relationship between self-efficacy, achievement motivation, and learning strategies. This supports the observed positive relationships between hope of success and self-efficacy, as well as self-regulation. Duda and Nicholls (1992) emphasized the connection between achievement orientation and beliefs about success. Their results are consistent with the finding that those who are more achievement-motivated also generally display higher levels of self-efficacy. Elias, Noordin, and Mahyuddin (2010) also contribute to the result by identifying significant correlations between achievement motivation and self-efficacy in university students, providing further support for the positive relationship between hope of success and self-efficacy. The study conducted by Kadhiravan (2012) adds to the result by demonstrating a positive relationship between self-regulation and achievement motivation, reinforcing the observed relationships between Hope of Success and self-regulation.

People who have higher hopes for success tend to view obstacles as challenges and have a positive outlook on their abilities and potential accomplishments (Atkinson & Feather, 1966; Kamlesh, 2004). This positive mindset may help individuals attain higher levels of self-efficacy beliefs, which would give them confidence in their capacity to overcome obstacles and complete tasks successfully. Similarly, their hope for success might reinforce their motivation and commitment to self-regulate their behavior and actions. Since people in positive emotional states are more inclined to believe in their ability to succeed, these emotional factors may contribute to an increased sense of self-efficacy (Tod, 2014). Additionally, those who have a strong sense of hope for success actively look for opportunities to improve their knowledge and abilities. Their self-efficacy and self-regulation skills are reinforced by positive experiences as they succeed across various endeavors, starting a self-reinforcing cycle of growth and improvement. Setting ambitious goals and achieving them leads to increased self-efficacy and self-regulation, which fuels their motivation to pursue more challenges, thus creating a self-reinforcing cycle. (Hoyle, Meece, & Blumenfeld, 1988)

Individuals with strong hope for success possess an internal locus of control, believing that their actions and efforts can influence outcomes (Fini & Yousefzadeh, 2011). Since they are more inclined to accept accountability for their actions, set goals, and manage their behavior to achieve desired results, this mentality is consistent with self-efficacy and self-regulation. As a result, the presence of an internal locus of control as a component of hope for success may contribute to increased self-efficacy and self-regulation skills. Therefore, the combination of these factors could potentially lead to higher levels of self-efficacy and self-regulation. Individuals who have high hopes for success tend to set high standards for themselves and are more inclined to persist in the face of setbacks (Kaynak et al., 2014). This goal-oriented approach may also help students build self-regulation skills as they learn how to manage their time, energy, and resources in order to achieve their goals. They are more likely to approach challenges with confidence and optimism, leading to successful outcomes (Cox, 1998; Murr et al., 2018). These positive experiences can reinforce their self-efficacy beliefs and self-regulation,

resulting in a self-reinforcing cycle in which increased hope of success fuels increased self-efficacy and self-regulation. In addressing the relationship between self-efficacy and self-regulation, Pintrich and De Groot (1990) discovered that among students, self-efficacy was positively correlated with self-regulatory strategies like planning, monitoring, and regulating. In the same way, Bouffard-Bouchard, Parent, and Larivee (1991) found that students with higher self-efficacy are more likely to use self-monitoring, self-regulatory, and self-evaluative strategies than students with lower self-efficacy. This supports the relationships seen in this study even more. Ghonsooly and Ghanizadeh (2013) also contribute to the support by finding a significant relationship between self-regulation and self-efficacy beliefs. The positive association between self-efficacy and self-regulation may be due to shared cognitive processes and reciprocal influence (Adesola & Li, 2018). Self-efficacy is the belief in one's ability to do tasks, whereas self-regulation is the control of one's thoughts, feelings, and behaviors. As people succeed in completing tasks, their self-efficacy increases, which empowers them to overcome obstacles more efficiently by means of improved emotional regulation and focused thought (Bandura, 1997). A cycle of mutual reinforcement is thus created, which in turn strengthens their capacity for self-regulation. This synergy supports cognitive adaptability, where improvements in one domain bolster skills in the other, contributing to comprehensive self-development and effective goal attainment.

Strong self-efficacy often correlates with high motivation (Schunk, 1991), which aligns with the self-regulatory effort required to sustain goal-directed actions and maintain consistent progress (Zimmerman, 1986). This alignment highlights how believing in one's capabilities fuels the determination needed for effective self-regulation and goal pursuit. Moreover, a positive view of success is fostered by positive self-efficacy beliefs (Yuliyani, Handayani, & Somawati, 2017), which promote proactive planning, perseverance, and efficient self-regulation to accomplish desired results. This relationship highlights how proactive and resilient self-regulation are built upon a strong belief in one's own abilities, thereby increasing the probability of success.

There is a positive correlation between the hope of success and the fear of failure scores from the pre- and post-tests. This suggests that people who initially exhibited lower levels of fear of failure and higher levels of hope of success tend to stay consistent with these tendencies over time. Strong motivation and goal-oriented behavior are frequently linked to higher hopes of success (McClelland et al., 1976). Such people are more likely to persevere in pursuing their goals, even when faced with setbacks (Atkinson & Feather, 1966; McClelland, 1985). This perseverance can help them overcome their fear of failure and maintain their initial scores. Furthermore, people who have higher hopes for success might have a positive self-perception that prevents them from giving in to their fear of failure (Deci & Ryan, 1995). Confidence in their abilities acts as a safeguard, preserving this pattern over time by preventing heightened fear.

Those with a strong hope of success may have an approach-oriented tendency, which could account for the observed correlation between those who initially scored higher on hope of success and lower on fear of failure, maintaining these patterns over time (Atkinson, 1957; Heckhausen, 1963, 1991). Researchers like Gustems-Carnicer and Calderón (2013) have shown that when faced with challenges, this tendency increases their likelihood of using effective coping strategies like approach coping mechanisms. As a result, they are better equipped to deal with fear of failure and protect their self-belief from its negative influence over time.

Relationship between demographic variables, psychological measures and performance of the sportsmen

The second objective aimed to uncover the relationships between self-efficacy, self-regulation, and performance. Positive correlations were observed between initial performance levels in a sport and self-efficacy beliefs prior to and following the training; conversely, lower performance levels were associated with lower self-efficacy beliefs. This is consistent with findings from a number of studies, including those by Beauchamp, Bray, and Albinson (2002), Lane (2004), and Moritz et al. (2001), which demonstrate the reciprocal relationships between performance and self-efficacy.

High performance provides individuals with mastery experiences, which are essential sources of self-efficacy (Bandura 1994, 1997). When individuals perform well in a specific area, they become more confident in their skills, which increases their self-efficacy and beliefs. On the other hand, individuals with high self-efficacy demonstrate increased motivation, effective coping strategies, and resilience when faced with challenges, which contributes to improved performance (Beauchamp, Bray, and Albinson, 2002; Bandura, 1977, 1982). This dynamic synergy creates a self-reinforcing cycle in which achievements enhance belief, which in turn encourages more accomplishments, ultimately leading to improved performances. Furthermore, those who consistently perform well often attribute their success to their own capabilities and efforts (internal attribution) (Karnes & McGinnis, 1996). People who adopt this attributional style tend to have higher levels of self-efficacy because they feel more in control of their outcomes. The relationship between self-efficacy and performance is reciprocal; one's approach to tasks is influenced by their level of self-efficacy, and successful performances help to reinforce their sense of self-efficacy. This connection highlights this relationship. Furthermore, positive performance can lead to positive emotional states like confidence and enthusiasm. Higher levels of self-efficacy are linked to these emotions (Tod, 2014). Conversely, people who have high self-efficacy frequently approach tasks with positivity and confidence, which can improve their performance.

There may be a number of factors that affect the reciprocal pattern in the relationship between self-regulation and performance. Firstly, as mentioned earlier, success in sports contributes to higher self-efficacy beliefs (Feltz, 1988; Feltz & Mugno, 1983). Athletes are more likely to approach their sport with confidence when they have faith in their skills, and this increased confidence may motivate them to practice self-regulation in order to maintain and replicate their success. Self-regulation skills are best developed in motivating environments where goal-setting and feedback are prioritized (Boekaerts, 1997; Boekaerts & Corno, 2005). Additionally, these abilities depend on learning experiences and having access to particular information (Pintrich & Zusho, 2002). As a result, good performance not only provides feedback but also provides the experience required to develop effective

self-regulation skills, potentially resulting in an ongoing cycle of improvement. Self-regulation contributes to a strong work ethic and the ability to persevere in the face of setbacks. When improvement is slow, athletes with strong self-regulation are more likely to remain committed to their training regimen and continue striving for improvements. The current study aligns with research emphasizing the crucial role of self-regulation in sports performance, as demonstrated by an examination of elite and non-elite youth soccer players (Toering et al., 2009). Planning, self-monitoring, assessment, reflection, effort, and self-efficacy were among the self-regulation components examined in this study, which included 285 non-elite and 159 elite players between the ages of 11 and 17. Through logistic regression analysis (controlling for age), the study identified that higher scores in reflection and effort were associated with a superior performance level, particularly among elite players.

The present study's post-test showed that athletes perform better when they are older. Also, it was observed that higher performance in the pre-test led to stronger performance after the motivational training. One possible explanation is that people usually go through physical development as they age. According to Lesinski et al. (2020), this includes increases in cardiovascular capacity, bone density, muscle mass, and body mass. These physiological changes can enhance sports performance factors like strength, speed, and endurance. Also, as individuals engage in training and practice over the years, they develop better techniques and strategies, which can significantly impact their performance (Miller et al., 2018). They often have more experience in their respective sports. This experience can result in enhanced decision-making capabilities, knowledge of the game, and the ability to handle high-pressure situations. Furthermore, mental toughness and resilience tend to develop with age (Lundman, 2007). Athletes become better at managing stress, anxiety, and distractions, which may also benefit their performance in competitive settings.

In fact, studies have shown that as people get older, they tend to become more intrinsically motivated (Inceoglu et al., 2012). This intrinsic motivation, driven by personal satisfaction, enjoyment, and a genuine interest in an activity, can have a significant positive impact on their performance. Often, as individuals age, their life

experiences widen and they gain a more profound comprehension of their interests and passions; this can significantly enhance their intrinsic motivation. This can therefore result in increased levels of commitment, perseverance, and effort in their pursuits, which can ultimately lead to improved performance outcomes in a variety of domains (Ryan and Deci, 2000b).

The athletes in the present study were either participating in competitions or were taking rigorous training in their respective academies and sports clubs. Research studies, including the one conducted by Miller et al. (2018), have demonstrated that athletes who follow a consistent training schedule and have achieved favorable results in past competitions are more inclined to demonstrate consistent performance in their subsequent matches. This consistency can be attributed to their dedication and discipline. Furthermore, success in previous performances can increase an athlete's confidence (Feltz, 1988). This increased self-belief can positively influence post-test performance, as athletes with higher confidence levels are often more resilient and motivated to excel (Bandura 1977, 1982). Top of Form

Exploring Independent and Interaction Effects on Self-efficacy

An attempt was made to analyze the independent effect and interaction effect on self-efficacy. In this context, "group" refers to professional sportsmen and non-sportsmen; "training" categorizes participants into those who received training and those who did not (no training); and "achievement motivation" categorizes participants into those with high achievement motivation (HAM) and those with low achievement motivation (LAM). In our pursuit to understand their effect on self-efficacy, ANCOVA was initially considered for the analysis. However, the data violated parametric assumptions of normality and homogeneity. As a result, non-parametric statistical tests, such as the Mann-Whitney U-test, Wilcoxon signed-rank test, Kruskal-Wallis, and Steel-Dwass test, were employed to analyze self-efficacy. These robust non-parametric tests allowed us to explore the effects of groups, training, and achievement motivation on self-efficacy, with a keen focus on both independent and interaction effects.

Effects of Groups (Sports & Non-sports) on Self-efficacy

As revealed by the Mann-Whitney U test, sports participation appears to be a potential catalyst for increasing individuals' self-efficacy levels. The pretest did not reveal any significant differences between the groups. Nevertheless, significant differences were observed between the sport and non-sport groups on the post-test. Specifically, the sport group demonstrated superior performance on the general self-efficacy scale, with a higher mean rank compared to the non-sport group. This finding suggests that sports engagement has a positive effect on self-efficacy. This aligns with previous research, such as the study by Corretti et al. (2011), which also found a direct increase in self-efficacy due to sports involvement. Furthermore, Chunmei et al. (2022) found that active and effective sports participation boosts college students' self-confidence significantly.

Research has consistently revealed that playing sports has advantages for one's physical and mental health, as well as goal-setting opportunities and structured feedback, all of which contribute to higher levels of self-efficacy. Therefore, sports environments offer a unique combination of these factors, which is not commonly provided by non-sports environments (Beets et al., 2010; Wen & Beihe, 2020; Jingtao et al., 2022; Fox, 1999; Jewett et al., 2014; Doré, 2019; Thelwell & Weston, 2007; Medrano, 2016; Bandura, 1995; Jianguo et al., 2016; Qin et al., 2017; Yuqin, 2019; Meece et al., 1988).

Beets et al. (2010), Wen and Beihe (2020), and Jingtao et al. (2022) have conducted studies that demonstrate the beneficial effects of consistent physical exercise on exercise motivation and general self-efficacy. Overcoming challenges and setbacks in sports and daily physical exercise can further enhance individuals' self-efficacy levels, making them more confident in their skills and accomplishments. Additionally, participating in sports on a regular basis enhances mental and physical health (Fox, 1999; Jewett et al., 2014; Doré, 2019). Exercise causes endorphins to be released, which have been shown to improve mood, lower stress and anxiety, and boost overall well-being. These effects are important for fostering and boosting self-efficacy beliefs (Thelwell & Weston, 2007; Medrano,

2016). Together with the health benefits of sports, these positive emotional states foster an environment that helps people achieve and sustain higher levels of self-efficacy over time. It also calls for mental preparation, attention, and dedication, all of which can improve one's capacity for self-efficacy.

Setting and pursuing goals, whether they have to do with individual performance or team success, is a fundamental component of playing sports (Bandura, 1995). When people reach these objectives, it can considerably increase their sense of self-efficacy because they realize that their hard work and dedication pay off in the form of tangible successes (Jianguo et al., 2016; Qin et al., 2017; Jingtao et al., 2022). In the realm of sports, players frequently get the opportunity to establish and meet challenging goals, which promotes a strong sense of mastery and achievement. These factors could be responsible for the higher levels of self-efficacy that are frequently observed in athletes. Also, sports environments are often designed to offer valuable feedback and support from coaches, teammates, and peers. This constructive feedback and encouragement could potentially strengthen individuals' beliefs in their ability to enhance their skills and attain their objectives, thereby resulting in higher self-efficacy (Yuqin, 2019). The structured feedback and competitive dynamics found in sports environments contribute to these elevated levels of self-efficacy, setting them apart from non-sport environments.

Participating in sports activities also provides individuals with opportunities to develop and refine various skills. According to Bandura's social cognitive theory (Meece et al., 1988), mastery experiences—which can result from success and improvement in these skills—are a major source of self-efficacy beliefs. As people see their competence and abilities grow in the context of sports, they are likely to develop greater confidence in their abilities, which can extend to other areas of life, including general self-efficacy. Sports also foster a sense of achievement, mastery, and competence, all of which contribute to increased self-efficacy beliefs.

The Wilcoxon test also revealed that, regardless of their achievement motivation, the sports group that received training improved from the pre-test to the post-test. This observation implies that, irrespective of the participants' initial

achievement motivation levels, the motivational training intervention had a positive effect on their self-efficacy levels. This is in line with the objective of motivational training, which is designed to strengthen a person's confidence and self-belief. Garvin's (2014) study lends support to the notion that motivational training, similar to psychological skills training (PST), can have an additive impact on self-efficacy levels in individuals involved in sports. According to Garvin's research, training plays a crucial role in enhancing athletes' self-belief in their abilities, irrespective of their initial levels of achievement motivation. It is linked to improved self-efficacy and the application of psychological strategies.

The psychological strategies included in the motivational training included goal-setting, visualization, and self-talk. These techniques are well-known for being crucial in helping people believe in their own abilities, which is likely why the self-efficacy in this study has also increased (Gilbert, 2011; Rieder et al., 2017). This effect highlighted how goal accomplishment boosts confidence universally and was especially noticeable for participants with varying levels of achievement motivation (Atkinson, 1974; McClelland, 1961). Moreover, the training instilled values of persistence and resilience, similar to factors known to enhance psychological attributes like mental toughness (Reese, 2005) and the skill of persevering in the face of setbacks (Bingöl et al., 2018), contributing significantly to strengthening their self-efficacy.

This was based on the ideas of self-perception theory, which holds that people can determine their attitudes and abilities by looking at their own behavior (Bem, 1972). Engaging in motivational training activities such as self-awareness sessions and successfully completing them likely led participants to perceive themselves to be more competent and self-assured, thereby heightening their self-efficacy beliefs. Furthermore, the motivational training program was designed to foster positive emotional states, such as enthusiasm and optimism. The perception of self-efficacy may have been substantially influenced by these positive emotions (Tod, 2014), as they may have felt more energized and confident in their ability to overcome obstacles.

Effects of Training (Training & No-training) on Self-efficacy

On the pretest and posttest, no significant difference was observed between the groups that received training and those that did not. The lack of significant differences in self-efficacy observed in the pre-test and post-test between the training group (consisting of individuals who underwent motivational training) and the no-training group (those who did not receive motivational training) may be attributed to the composition of these two groups. It is noteworthy to mention that in an attempt to observe the independent effect, individuals who were not involved in sports were also included in both the training and no-training groups. The motivational training program was carefully designed to accommodate the specific needs and attributes of sportsmen. Given this tailored focus, the effectiveness of the training might have been influenced by the heterogeneity within the training group. In essence, the composition of this group included members with diverse athletic and non-athletic backgrounds, which might have compromised the efficacy of the training in promoting self-regulation. Researchers (Thomas et al., 2007) have emphasized the critical importance of tailoring interventions to specific training and competition phases of the season for maximum effectiveness. Particular attention to detail is equally imperative in the domain of sports. Given the diverse range of participants in our research, comprising individuals with and without athletic experience, it becomes apparent that these complexities may have played a role in the training's perceived lack of significance and its potential dilution.

Effects of Achievement Motivation (LAM & HAM) on Self-efficacy

The study's findings reveal that achievement motivation has a significant, independent, and significant impact on individuals' self-efficacy beliefs, underscoring the key role of motivation in shaping how individuals perceive their capabilities and potential for success. Self-efficacy was higher among participants with high achievement motivation (HAM) on both the pre-test and post-test. Researchers have emphasized that individuals with high achievement motivation excel through goal-setting, persistence, and a positive feedback loop, driving them to achieve challenging goals and strengthening their self-efficacy (Kaynak et al., 2014;

Atkinson and Feather, 1966). These factors contribute to their profound trust in their abilities and their constant pursuit for excellence.

According to Schunk (1995), motivation and performance can be predicted with respect to self-efficacy. This is consistent with the current study's results, which indicate that people with high achievement motivation (HAM) have greater self-efficacy. Their heightened self-confidence is probably a result of their diligent endeavor to achieve mastery and success, which is consistent with the notion that self-efficacy has a positive impact on both motivation and performance. In addition, the research conducted by Meece, Blumenfeld, and Hoyle (1988) regarding task-mastery goals provides further support for the idea that individuals motivated by achievement would participate more actively in tasks, thereby bolstering their sense of self-efficacy.

Individuals with a strong drive to set and accomplish ambitious objectives are typically characterized by high achievement motivation (Kaynak et al., 2014). They display a remarkable commitment to challenging themselves and pushing their boundaries. Their tendency to pursue goals not only signifies their ambition but also significantly contributes to enhancing their confidence. As they pursue these activities and gradually overcome them, they gather evidence that supports their belief in their own abilities. The act of setting and accomplishing these goals can significantly contribute to their self-efficacy (Meece, Blumenfeld, & Hoyle, 1988). On the other hand, LAM individuals might set less challenging goals, which may not provide the same self-efficacy-boosting effect.

Persistence is an attribute of high-achieving, motivated individuals. They demonstrate a remarkable ability for persistence when confronted with challenges, obstacles, and even setbacks (Atkinson and Feather, 1966). This tenacity in the pursuit of their goals equips them with a unique advantage when it comes to self-efficacy. Their willingness to face challenges head-on and persevere in overcoming them leads to task and skill mastery over time. This mastery, in turn, significantly contributes to their enhanced self-efficacy. By consistently facing and overcoming

challenges, individuals develop a firm belief in their own capability to overcome obstacles, thereby increasing their self-efficacy (Meece et al., 1988).

Individuals with high achievement motivation frequently find themselves caught in a positive feedback cycle. Their dedication to achieving challenging goals leads them to accomplish such feats regularly (Kaynak et al., 2014). With each achievement, they acquire tangible evidence that they are capable of performing at a high level. These achievements serve as strong validators, strengthening their confidence (Meece, Blumenfeld, & Hoyle, 1988). The more they succeed, the stronger their confidence in their abilities becomes. The recurring pattern of setting and achieving ambitious goals, followed by the positive consequences of increased self-efficacy, establishes a self-reinforcing system that consistently enhances their confidence and drive to succeed. On the contrary, individuals with LAM may set goals that are comparatively easier to achieve and show less determination to persevere, which could result in an alternative feedback loop that fails to enhance self-efficacy to the same extent.

A characteristic that sets apart HAM individuals is their attributional style, particularly in relation to success. They have a tendency to attribute their achievements to internal factors such as hard work and innate abilities (Weiner & Kukla, 1970). This attributional pattern may contrast with the tendency of low achievement motivation (LAM) individuals, who may be more inclined to attribute their successes to external factors or even luck. This potential difference in attributional styles has important implications for self-efficacy beliefs. By attributing their achievements to their own efforts and abilities, HAM individuals may strengthen their beliefs regarding their own competence. This potential self-reinforcing cycle of taking responsibility for their successes could contribute significantly to their heightened self-efficacy, as they may consistently perceive themselves as capable and effective agents in achieving their goals.

Individuals with HAM have a tendency to approach tasks with a positive and motivated mindset, which may have an impact on their perception of their capabilities. This positive attitude has the potential to contribute to higher self-

efficacy (Tod, 2014). Their positive perspective, frequently marked by a conviction in their own ability to achieve success, could potentially function as a fundamental component in enhancing their self-efficacy. This constructive mindset, which may be characterized by resilience in the face of adversity and a strong determination to excel, has the potential to significantly contribute to their self-belief, thereby potentially fostering self-efficacy.

First order interaction effect

Interaction effect of Groups x Training on Self-efficacy

In the post-test, the Kruskal-Wallis test showed a significant interaction between the groups. Subsequent analysis using the Steel-Dwass test revealed that both the sport groups that received training and the group that did not receive training had higher self-efficacy than the non-sport group that did not receive training. The observed pattern of differences between sports and non-sports groups was consistent with the results of the independent effect analysis, indicating that the effects of sports participation were also reflected in the interaction effect. This suggests that sports participation itself, irrespective of whether individuals received specific motivational training, indicated higher levels of self-efficacy. This consistent pattern highlights the possible psychological advantages linked to participation in sports, particularly in terms of fostering self-belief and confidence in one's abilities. Whether individuals underwent motivational training or not, the positive influence of sports on self-efficacy remained evident, highlighting the enduring influence of sports participation in this study.

The pattern observed in the interaction effect mirrors what was found in the independent effect analysis between sports and non-sports groups. This implies that the differences in self-efficacy between individuals engaged in sports and those who do not are constant throughout both the training and non-training groups. In other words, the impact of sports participation (or the lack of it) on self-efficacy seems to persist even when motivational training is considered.

Researchers have emphasized the significance of self-efficacy in the learning process. They have highlighted how learners gain confidence as they see their progress toward their goals (Elliott & Dweck, 1988). Furthermore, research has shown that students' self-confidence increases when they receive feedback regarding their progress toward achieving their goals (Bandura & Cervone, 1983). Such opportunities for learning are provided within the realm of sports, as qualities like setting goals, staying determined, and improving skills become important in this field. Sports activities additionally provide a setting that incorporates support and feedback mechanisms. These aspects of sports facilitate the development of self-belief. As individuals experience the ups and downs of sports, they gradually gain confidence in their abilities (Bandura, 1995; Yuqin, 2019).

The findings of the present study are consistent with Bandura's self-efficacy theory in a number of essential respects (Bandura, 1995). It confirms the central premise of the theory, which suggests that engaging in activities demanding goal-setting, perseverance, and skill development can enhance an individual's belief in their abilities. Sports, due to their intrinsic characteristics of challenging goals and skill development, have become an appealing setting to examine the impacts of self-efficacy. Additionally, the study highlights the significance of perceived mastery experiences, which are fundamental to Bandura's theory. Engaging in sports frequently presents individuals with obstacles that they overcome, resulting in a sense of accomplishment. This sense of mastery significantly contributes to the growth of self-confidence, providing additional support for the theoretical framework. Self-efficacy is not the only influence on behavior. Behavior is contingent upon a multitude of factors. Additional significant factors to consider in achievement-oriented contexts are abilities, expected outcomes, and the perceived value of achievements (Schunk, 1989). In the absence of necessary skills, high self-efficacy will not translate into competent performances. Outcome expectations, or beliefs concerning the probable outcomes of actions, are essential because individuals are not motivated to act in ways they believe will result in negative outcomes. The perceived value of outcomes refers to how strongly people desire certain outcomes in comparison to others. It is hypothesized that self-efficacy

influences the choice and direction of most human behavior, given sufficient skills, positive outcome expectations, and personally valued outcomes (Bandura, 1989b).

Interaction effect of Groups x Achievement Motivation on Self-efficacy

Upon examining the interaction effect, an intriguing and intricate pattern emerges. In the self-efficacy pre-tests, the results closely mirror what was observed in the independent effects of achievement motivation. Individuals with high achievement motivation, irrespective of their involvement in sports, consistently have higher mean self-efficacy scores than their low achievement motivation counterparts. The findings suggest that individuals with a greater inclination towards achievement tend to exhibit higher levels of self-efficacy even before any intervention or training. Nonetheless, a more intriguing finding emerged during the post-test, wherein sports participation became significant in addition to achievement motivation. It was observed that individuals in the sports groups, regardless of their level of achievement motivation, as well as those in the non-sports group with high achievement motivation, demonstrated higher self-efficacy when compared to individuals with low achievement motivation in the non-sports group. This suggests that sports involvement doesn't just enhance self-efficacy independently; it also has an amplifying effect when combined with high achievement motivation.

When examining the effect of achievement motivation and sports participation on self-efficacy, each factor individually has a significant influence. Additionally, the combined effect of these two factors on self-efficacy is consistent with the findings that were obtained from their individual analyses. Research has highlighted the relationship between sports, achievement motivation, and self-efficacy. Bandura's (1997) self-efficacy theory asserts that individuals are more likely to cultivate a sense of self-efficacy through participation in activities that demand goal-setting, perseverance, and skill enhancement. This aligns closely with the nature of sports, where athletes often set specific performance goals and work diligently to achieve them (Elliott & Dweck, 1988). Moreover, studies have shown that achievement motivation, characterized by a drive for success and the willingness to strive for excellence, plays a crucial role in sports participation (Roberts, 2012).

Athletes with high achievement motivation not only compete but also strive to excel in their chosen sport. This combination of sports and achievement motivation promotes an environment in which individuals are motivated to push their limits and improve their skills on a regular basis (Duda & Hall, 2001).

Athletes often face challenges and obstacles on their way to achieving their goals. They gain confidence in their abilities as a result of these experiences (Bandura, 1997). When athletes perceive their progress and success as a result of their dedication and hard work, it reinforces their self-efficacy (Feltz & Lirgg, 2001). This increased self-efficacy, in turn, can lead to improved performance and a greater belief in their abilities not only in sports but also in other areas of life (Woodman & Hardy, 2003). Furthermore, sports often provide a structured environment with guidance and feedback from coaches, trainers, and teammates. The development and self-efficacy of athletes are significantly influenced by this feedback system (Horn, 2008). Athletes are provided with valuable information that helps in gaining an understanding of their strengths and areas requiring improvement. Constructive feedback reinforces their belief that they have the capability to achieve their goals (Zimmerman, 2000).

Athletes with high achievement motivation strive for more than just participation; they strive for excellence (Conroy et al., 2003). This motivation fuels their efforts and resilience in the face of setbacks, increasing their self-efficacy (Nicholls, 1984).

Interaction effect of Training x Achievement Motivation on Self-efficacy

The Kruskal-Wallis test revealed a significant interaction effect between 'Training x Achievement Motivation' on self-efficacy post-test, indicating that the combined influence of these two factors had a significant impact on participants' self-efficacy outcomes. Therefore, the post hoc analysis of the Steel-Dwass test was done to gain a more detailed understanding of this interaction. The results of the study indicated that participants with high achievement motivation, irrespective of their participation in training, had higher mean ranks in self-efficacy post-test scores

compared to individuals with low achievement motivation, who were similarly divided into those who received training and those who did not. This result also closely aligns with the independent effect, as observed previously in the analysis of the group and achievement motivation interaction, where individuals with high achievement motivation (HAM) consistently exhibited the highest mean ranks in self-efficacy.

The relationship between high achievement motivation and increased self-efficacy is consistent with the finding that individuals with high achievement motivation performed better than those with low achievement motivation. High achievers typically set ambitious goals and show persistence in overcoming challenges. These qualities naturally contribute to higher self-efficacy because individuals who believe they can achieve their goals are more likely to put in the effort required to succeed. Therefore, individuals with high achievement motivation tend to have higher self-efficacy due to their proactive goal-setting and problem-solving behaviors.

Locke and Latham (1990) undertook an exhaustive meta-analysis of research studies to examine the correlation between achievement motivation and self-efficacy. Their analysis of data from over 100 studies across various domains, including work settings, education, and sports, consistently revealed a strong positive correlation between high achievement motivation and self-efficacy. The results of Locke and Latham's research highlighted the critical role that persistence and goal-setting—two characteristics of high achievers—play in promoting self-efficacy beliefs.

The fact that this difference in self-efficacy levels persists regardless of whether individuals received training or not suggests that the impact of achievement motivation on self-efficacy remains strong even in the presence of a training intervention. This highlights the inherent strength of achievement motivation in strengthening self-efficacy. A study by Bandura (1986) also found that individuals with high achievement motivation tend to display heightened self-efficacy. He conducted research within the domain of social cognitive theory to investigate the correlation between motivation and self-efficacy across multiple sectors, such as

sports and education. There was an underlying trend in his research findings that individuals with strong self-efficacy beliefs were more likely to be highly motivated to accomplish particular objectives, be it in academics or athletics.

Interaction effect of "Groups, Training and Achievement Motivation" on Self-efficacy Pre-test Post-test

In the pre-test and post-test stages of the study, significant interactions were found when taking into account the combined effects of sports participation, training, and achievement motivation. In the pre-test, both the non-sport training and no-training groups, as well as the sport-no-training group with high achievement motivation (HAM), had greater mean ranks compared to the sport training, non-sport training, and no-training groups with low achievement motivation (LAM). Additionally, compared to non-sport no-training with low achievement motivation (LAM), sport training with high achievement motivation (HAM) had a higher mean rank. This finding is consistent with the independent effect previously discussed, which found that people with high achievement motivation consistently outperformed those with low achievement motivation in terms of self-efficacy pre-test scores.

Subsequently, in the post-test, self-efficacy revealed significant differences among the groups. Particularly compared to their counterparts in the non-sport training and no-training groups, who had low achievement motivation (LAM), both the sport training and no-training groups and the non-sport training and no-training groups, which were all characterized by high achievement motivation (HAM), displayed higher levels of self-efficacy. This finding lends support to the consistent pattern of results showing that people with high achievement motivation—regardless of whether they play sports or participate in training—generally show higher mean self-efficacy scores than people with low achievement motivation. This result is consistent with previous studies (Zhang et al., 2015; Hodges & Kim, 2010; McEwan & Goldenberg, 1999). In a study conducted by Zhang et al. (2015) involving 716 student nurses from seven hospitals in western China, the researchers utilized three scales—the General Data Scale, the Self-Efficacy Scale (SES), and the Achievement

Motivation Scale (AMS)—to collect data. The results showed a strong positive correlation between achievement motivation and self-efficacy. The study came to the conclusion that, rather than gender and place of residence, self-efficacy showed associations with age and level of education. Additionally, in a study conducted in 2010 by Hodges and Kim, 103 college students enrolled in an online mathematics course were divided into groups and given different email treatments designed to improve self-regulation. The findings revealed a noteworthy correlation between self-efficacy and achievement, but there was no significant impact of email treatments. In a similar vein, Elias et al. (2010) discovered a connection between self-efficacy and achievement motivation in their study of college students.

A plausible explanation for the current findings could be that people who have high achievement motivation typically set challenging tasks and pursue them with unwavering determination (Locke, 1996). This intrinsic motivation serves as a strong foundation for building self-efficacy. It forms a powerful combination when paired with structured goal-setting and motivation-enhancing techniques offered by motivational training. Participants are not only inclined to set ambitious goals but also possess the psychological tools to persevere even when faced with obstacles. Additionally, participating actively in sports exposes people to a variety of obstacles and achievements. These experiences significantly increase self-efficacy (Bandura, 1997). Any sporting achievement, no matter how small, boosts confidence in oneself. Furthermore, playing sports can be mentally and physically taxing, pushing players to go beyond their usual limits. Overcoming these challenges can result in a significant increase in self-efficacy."

Effects of Group (Sports & Non-sports) on Self-regulation

The findings of the analysis of covariance revealed a statistically significant difference in the self-regulation post-test scores between athletes and non-athletes. In particular, athletes had better levels of self-regulation than athletes who did not play sports, suggesting that active sports participation could be beneficial in the growth and improvement of self-regulation abilities. These results are in line with earlier research, including studies by Kitsantas and Zimmerman (2002) and Kitsantas and

Kavussanu (2011). These studies have shown that athletes frequently use self-regulation techniques to improve their performance. Boekaerts (1997), who claims that children develop self-regulation skills most effectively in environments that are motivating and goal-oriented, supports the significance of this context. Young sports that fit this description stand out as the perfect environment for developing self-control abilities. Sports competition, which often demands strict schedule adherence, instills discipline and habits that support self-regulation. Athletes who regularly use these self-regulation techniques in training and competition settings develop the ability to apply these techniques to other aspects of their lives, which promotes holistic self-development (Durand-Bush & Salmela, 2002; Zimmerman & Martinez-Pons, 1986). Additionally, it offers athletes coaching and structured training programs, where trainers and coaches help athletes develop self-regulation abilities like focus, discipline, and time management. Such guidance and feedback encourage self-reflection and strategy adjustment, which are essential components of self-regulation. This nurturing setting not only facilitates athletes' progress but could also extend its benefits to those striving for effective self-regulation.

Sports involve mental as well as physical training, and mental training methods such as visualization and constructive self-talk are essential for improving athlete performance (Hatzigeorgiadis et al., 2014; Cumming & Hall, 2002). Visualization includes athletes vividly imagining themselves successfully performing skills or achieving specific goals, reinforcing positive mental images. This process enables athletes' greater mental control over their actions and emotions during actual competition, assisting self-regulation by reducing anxiety and heightening focus (Skodzik, 2018; Pile, 2021). On the other hand, positive self-talk employs affirmations to build confidence and manage stress, enabling athletes to maintain composure and motivation in challenging situations. By reducing distractions, increasing focus, and cultivating a positive mindset during competition, these techniques help athletes better control their thoughts, emotions, and behaviors. (Latinjak, 2019; Barwood, 2015; Hatzigeorgiadis & Galanis, 2017).

The competitive nature of sports acts as a powerful catalyst for increasing one's belief in their ability to overcome obstacles and achieve success. The drive to outperform opponents and gain victory may ignite a deep motivation within individuals, encouraging them to regulate their efforts and behaviors with precision. Athletes are frequently pushed to their absolute limits in this high-stakes setting, which forces them to use their self-regulation abilities to maximize their performance (Moon, 2003; Zimmerman & Martinez-Pons, 1986). Whether it's meticulously planning strategies, managing time, or maintaining composure under pressure, the demands of competition require athletes to hone their self-regulatory abilities, making sports a prime breeding ground for enhanced self-regulation skills (Boekaerts & Corno, 2005; Pintrich & Zusho, 2002).

Achievement Motivation (LAM & HAM)

Individuals with Low Achievement Motivation (LAM) and High Achievement Motivation (HAM) did not show significant differences in self-regulation. Several factors may have contributed to the observed outcome in self-regulation.

This finding is in contrast to those of the study by Kadhiravan, S. (2012), which revealed different results. Additionally, it's noteworthy that the study led by Zamroni, E., Awlawi, A. H., & Kasau, M. N. R. (2022), similarly indicated non-significant results consistent with the present study's findings. It's interesting to note that while the correlation matrix detected a relationship between achievement motivation and self-regulation in both pretest and post-test stages, this association did not translate into a significant impact in the ANCOVA analysis.

Self-regulation is a complex concept that includes the capacity to control one's actions, feelings, and thoughts to achieve specific goals. It is based on a complex interplay of cognitive and emotional processes. Achievement motivation, while undoubtedly effective in influencing an individual's aspirations and beliefs, may not directly correspond to the nuanced mechanisms that underlie self-regulation (Bandura, 1997; Zimmerman, 2006; Baumeister & Vohs, 2004; Ericsson, Krampe, & Tesch-Römer, 1993). Furthermore, achievement motivation may not fully capture all of the internal and external factors that contribute to the development of self-

regulation. Factors, such as environmental context, past experiences, and individual disposition, play a more dominant role in shaping an individual's self-regulatory skills (Al-Hilawani, 2003; Anshel & Porter, 1996; Zimmerman & Martinez Pons, 1986; Kamphuis et al., 2008; Nota et al., 2004; Sirin, 2005; Zimmerman & Martinez-Pons, 1990; Pintrich & Zusho, 2002) Therefore, although achievement motivation may influence some aspects of motivation, it may not be the sole determinant of an individual's self-regulatory capabilities.

Moreover, self-regulation is an acquired skill that requires learning and practice over time. It requires the acquisition of strategies to manage impulses, set priorities, and maintain focus. According to Boekaerts (1997) and Boekaerts & Corno (2005), people are best able to develop self-regulatory skills in an inspiring environment that emphasizes goal-setting and feedback—something that may not be present in the current non-sport participant's environment—which highlights the complex and holistic nature of acquiring and honing self-regulation skills. Moreover, the ability to self-regulate is rooted in experiences related to learning and development. This is consistent with research by Pintrich & Zusho (2002), who note that having access to adequate domain-specific (declarative and procedural) knowledge bases is a crucial requirement for learners to develop their ability to self-regulate. This association emphasizes how developing self-regulation involves more than just motivation; it also calls for a solid foundation in knowledge and experiential learning.

First order interaction effect

Interaction effect of Groups x Training on Self-regulation

For self-regulation, ANCOVA analysis uncovered significant differences in the interaction between group and training. Post hoc analysis using the Scheffe test was subsequently conducted to delve deeper into these differences. Regardless of whether they received training or not, the sport group that got motivational training had the highest mean rank in self-regulation, outperforming both non-sport groups. This finding suggests that participation in sports combined with motivational training

has a beneficial effect on enhancing self-regulation skills. Athletes who underwent the training seem to benefit significantly, possibly due to the tailored nature of the program designed to address the unique needs of sports participants. Furthermore, the sport-no-training group also displayed a notably higher mean compared to the non-sport group that received training. While the training proved to have no significance for non-sports, this finding suggests that the inherent characteristics of participating in sports, such as discipline, focus, and goal-setting, may help in the development of self-regulation even in the absence of specific training interventions.

According to Gould (2018), individuals exhibit heightened motivation when confronted with challenges and are acutely aware that the outcome will undoubtedly determine their success or failure. This situational-centered approach is in line with the various forms of self-regulation that people use throughout the day in areas such as work, play, health, and more (Hofmann et al., 2012). The idea that motivational training in this study is more effective in sports, where athletes are naturally motivated to succeed in a competitive environment, is consistent with Gould's (2018) emphasis on the motivational impact of challenges. Cleary and Zimmerman (2001) and Ertmer and Newby (1996) found that experts, particularly in sports, have better self-regulation skills than non-experts. Understanding the relationship between expertise and self-regulation is crucial to understanding why motivational training is particularly effective in sports contexts. Moreover, the sports environment, as highlighted by Boekaerts and Corno (2005) and Pintrich and Zusho (2002), is characterized by rich feedback and a highly goal-directed structure. This setting provides an ideal environment for the development and application of self-regulatory abilities. The inherent goals of sports, often centered around achieving success and excellence, are well aligned with the principles emphasized in motivational training. Therefore, athletes, already oriented toward specific performance goals, are more likely to perceive motivational training as directly relevant to their ambitions, contributing to its heightened effectiveness in this population.

Similar to the current findings, researchers investigating psychological interventions have consistently reported positive outcomes regarding the

improvement of self-regulation skills. For example, a study by Sharp et al. (2013) used a mental skills training (MST) program on male adolescent elite rugby athletes. The participants thought the MST program was interesting and well-organized, which led to increased openness, honesty, and self-control in managing rugby performance. Furthermore, Maydokina and Kudashkina (2014) targeted junior athletes participating in track and field sports, employing the "Mental Self-Regulation in Sport" program. The intervention was successful in raising athletes' levels of self-control and self-regulation, highlighting the value of focused training in helping athletes develop these abilities. These findings collectively highlight the efficacy of psychological interventions in fostering self-regulation among athletes, supporting the idea that such interventions contribute positively to mental states and actions during sporting events.

In contrast to McCrory's (2013) study on military pilot-trainees from a non-sport population, where psychological skills training led to increased self-regulation behavior, the present findings revealed motivational training to have no significant effect on self-regulation in the non-sports group. The absence of a specific context or goal, like athletic performance, may be the reason for the lack of effect of motivational training on self-regulation in the non-sports group. It's possible that those in the non-sports group lacked a specific goal to apply the self-regulation techniques they had acquired from motivational training, such as winning a championship in sports. For these skills to be effective in a specific domain, such as sports, they may need to be relevant and applicable. In their research, Bouffard et al. (1995) looked at the relationship between academic performance, self-regulatory mechanisms, and goal orientation. The study, which included 702 college students, discovered systematic relationships between learning objectives and self-regulation in both genders as well as relationships between performance goals in boys in particular. Students with high concern for both learning and performance goals reported more self-regulatory strategies and achieved higher academic performance. This explains the current findings, illustrating the significance of having specific goals for applying self-regulation skills, aligning with the observed effectiveness in sports training.

Additionally, it's possible that the non-sports group wasn't as engaged or motivated during the training, which prevented them from internalizing the skills. Motivational training frequently depends on participants' engagement and dedication to the process. Ryan, R. M., & Deci, E. L. (2000) discussed self-determination theory, emphasizing that individuals need to internalize behaviors for successful change to occur. If participants in the non-sports group did not perceive the training as personally meaningful or relevant, the internalization of self-regulation skills may not have been achieved.

Effect of Motivational Training on the Performance of Professional Sportsmen

The seventh objective of this study was to comprehensively explore whether it could bring about significant enhancements in the performance outcomes of professional sportsmen in Mizoram. This objective sought to uncover whether tailored interventions focused on motivation could lead to meaningful improvements in athletes' performance, contributing to a deeper understanding of the factors that influence their success on the field.

As shown in Table 18, the Two-Way Analysis of Covariance (ANCOVA) revealed that performance had a significant effect, as evidenced by a significant F-value of 25.457 (p.001). This suggests that, even after taking into consideration the influence of the performance test, there are significant differences in the performance scores of the participants.

The primary focus of the study, motivational training, demonstrated a noteworthy F-value of 66.21 ($p < .001$), indicating a significant effect. This result provides strong evidence that motivational training has a significant effect on the performance of professional athletes. Participants who underwent motivational training in sports exhibited a notable mean performance score, while those who did not receive such training showed a distinct, lower mean score. This clear distinction in mean scores underscores the positive impact of motivational training on enhancing the performance outcomes of professional athletes.

The findings of the study shed light on a significant and noteworthy connection between motivational training and performance. Professional athletes who received motivational training outperformed their counterparts who did not receive such training. This finding suggests that motivational training has the potential to function as a catalyst for improving athletes' performance on the field.

A study by Weinberg and Gould (2015) highlighted that motivation serves as a driving force for athletes, determining their goal-setting behaviors, effort, and overall performance outcomes. It has been demonstrated that offering athletes structured motivational training programs improves their intrinsic motivation—that is, their internal drive and passion for their sport (Ryan & Deci, 2000). This internal drive is especially important for continuing dedication and excellence in performance.

Additionally, methods like goal-setting, visualization, and self-talk—all of which are being thoroughly researched and have been linked to enhanced performance—were included in the motivational training. Locke and Latham (2002) demonstrated that setting specific and challenging goals can lead to higher levels of performance by providing athletes with clear targets to strive for. Furthermore, it has been demonstrated that using imagery as part of motivational training improves an athlete's mental rehearsal and preparation, which has a positive effect on their real performance (Munroe-Chandler et al., 2011).

Also, the psychological aspect of sports performance is closely intertwined with the athlete's self-belief and confidence. Motivational training interventions, through techniques like positive self-talk and confidence-building exercises, are likely to contribute significantly to strengthening an athlete's self-efficacy (Bandura, 1997). High levels of self-efficacy have been linked to improved performance across various kinds of sports (Feltz et al., 2008).

These observed improvements in performance align with the principles of self-determination theory (Deci & Ryan, 2000), which suggest that interventions that tap into intrinsic motivation can have a positive impact on athletes' performance.

Self-determination theory holds that people's psychological needs for relatedness, competence, and autonomy are inborn. Enhancing athletes' internal motivation through motivational training can help them become more focused, more persistent, and ultimately perform better. According to the theory, athletes are more likely to perform at their best when they have a sense of mastery, autonomy, and a connection to their objectives.

The relationship between enhanced performance and motivational training highlights the critical role psychological factors play in determining an athlete's success in competitive sports.

The results align with earlier studies that investigated how psychological skill interventions affected sports performance outcomes. Thelwell et al. (2006), for example, studied a psychological skills intervention for soccer midfielders and showed that training in psychological skills, such as self-talk, visualization, and relaxation, improved performance. Sheard and Golby (2006) also found that, after participating in a psychological skills training program, there were notable improvements in both positive psychological traits and swimming performance.

Furthermore, amateur golfers' psychological abilities and performance levels significantly improved following imagery and self-talk training, according to a study by Thomas and Fogarty (1997). The study's methodology closely resembles the motivational training that was investigated, highlighting the significance of focused interventions in enhancing athletes' physical and mental performance.

Beauchamp et al. (2012) further illustrated the potential of such interventions in elite sports contexts by demonstrating the successful integration of psychological skills training and biofeedback techniques to improve the performance of a national speedskating team.

The study contributes to the growing body of evidence highlighting the positive effects of motivational training on athletic performance. The noteworthy effect noted emphasizes how focused interventions can improve players' abilities and eventually lead to better results in professional sports.

In conclusion, the ANCOVA findings provide compelling evidence for the significant impact of motivational training on the performance of professional athletes. Thus, the hypothesis that motivational training would have a major impact on professional athletes' performance is accepted in light of the findings. These findings highlight motivational training's significance as a crucial element in improving athletes' performance outcomes.

Chapter – VI

SUMMARY AND CONCLUSION

In Mizoram, sports are ingrained in the cultural fabric, cherished deeply, and serve as a significant source of employment (Express Web Desk, 2020; Thadou, 2020). The recent rise in professional Mizo athletes and the increasing participation in leisure sports across all age groups highlight the growing importance of sports in the region. Given the significant role that sports play in Mizoram's social structure, it is necessary to conduct a thorough investigation into the psychological aspects of sports performance. Mizoram's passion for sports, from global favorites like badminton and football to traditional games, offers a distinctive setting for investigating the effects of psychological skills training. As the professional and recreational sports scene in Mizoram undergoes transformation, there is a growing emphasis on understanding the psychological factors that impact athletic performance. The state's commitment to developing Mizo youth athletes highlights the importance of assessing the effectiveness of psychological skills training. This research seeks to explore the impact of motivational training on self-efficacy, self-regulation, and performance among professional athletes in Mizoram. Through examining these factors, the research hopes to reveal the benefits of including motivational training in athletes' training, offering valuable insight for promoting mental preparedness. The ultimate goal is to improve psychological states, which will lead to more consistent and improved athletic performance.

This research, which was carried out on a sample of 323 young adults residing in Mizoram and ranging in age from 13 to 30, employed three psychological instruments to assess behavioral dimensions: the Achievement Motives Scale (Lang & Fries, 2006), the Self-Regulation Scale (Schwarzer et al.,1999), and the General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995). The athletes' performances were assessed using a specifically designed Sport Performance Index. Using a 2x2x2 factorial design, the quasi-experimental study was conducted in three stages: baseline, intervention, and evaluation. Factors considered included sports background (professional sportsmen vs. non-sportsmen), achievement motivation levels (low vs. high), and participation in motivational training (training vs. no-

training). The data was subjected to a comprehensive statistical analysis using SPSS version 26.

Parametric statistics were applied after screening and handling outliers. Reliability tests, such as Cronbach's alpha, and descriptive statistics were used to determine internal consistency and characterize variables. Pearson's product-moment correlation coefficient was employed to examine the interrelationships among demographic variables, self-regulation, achievement motivation, self-efficacy, and performance. A three-way analysis of covariance (ANCOVA) was employed for the primary analysis, with pre-test measures serving as covariates. Additionally, due to the General Self-Efficacy Scale's non-parametric assumptions, alternative tests such as the Mann-Whitney U-test, Wilcoxon signed-rank test, Kruskal-Wallis test, and Steel-Dwass test were performed.

Levels of the participant's self-efficacy, self-regulation, and achievement motivation

To measure participant self-efficacy level, the General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995) was used in both the original and translated (Mizo) versions of the study. The translated version of the questionnaire had a slightly lower mean than the original, which indicated a slight variation in mean self-efficacy scores. Notably, the original version displayed higher variability in standard deviations due to its widespread application, while the translated version showed lower standard deviations, indicating greater consistency among Mizo participants. Numerous research studies (Jurecska et al., 2011; Ahn et al., 2016) have reported findings that support lower self-efficacy among collectivistic cultures. Jurecska et al. (2011) highlighted the impact of cultural orientations on individual self-efficacy perceptions. Given that Mizo society is collectively oriented, it is likely that factors other than personal abilities influence self-efficacy. This is consistent with research by Ahn et al. (2016), which showed that students from collectivistic societies—like the Mizo community—had lower levels of self-efficacy. Socially conveyed perceptions of self-efficacy may have greater influence in collectivistic societies

where cooperation is highly valued. This helps to explain why Mizo participants' close-knit cultural dynamics may have contributed to their lower self-efficacy scores.

Similarly, the original and translated (Mizo) versions of the Self-Regulation Scale (SRS; Schwarzer et al., 1999) were used to assess the level of self-regulation. The original version showed the highest mean self-regulation score, whereas the translated version displayed a relatively lower mean score. The translated data showed a narrower standard deviation, indicating that Mizo participants' self-regulation was more consistent. In a 2017 study, Kizilcec & Cohen examined the effects of an eight-minute self-regulation intervention and discovered that individualist and collectivist cultures differed in the intervention's effectiveness. Similarly, gender and cultural variations in self-regulation were investigated in Kurman's study (2001). Israelis performed better than Singaporeans on a task that required them to select levels of difficulty for maximum achievement, which is consistent with the current finding that cultural differences affect the efficiency of self-regulation and lead to differences in task preferences and performance.

Examining the Hope of Success (HOS) and Fear of Failure (FOF) scores across different versions of the AMS-R scale revealed distinct patterns. The original version showed the highest mean for HOS, indicating a relatively strong sense of hope for success among participants. Conversely, the original version showed the lowest mean for fear of failure, suggesting a relatively lower fear of failure among the same participants. Interestingly, the translated version tailored for the Mizo population displayed the narrowest standard deviations for both Hope of Success and Fear of Failure on the AMS-R scale, indicating greater consistency in responses within the Mizo context.

In a study that supported the consistent trend of cultural influence on achievement motivation, particularly noting lower levels in collectivistic societies, Sagie et al. (1996), in their intercultural study across the United States, the Netherlands, Israel, Hungary, and Japan, found achievement tendencies to be highest with U.S.A. respondents (individualistic culture) and Japanese and Hungarian respondents (collectivistic societies) showing the lowest.

Relationship between demographic variables, self-efficacy, self-regulation, and performance for the overall samples

Several significant relationships were observed among demographic variables. There was a significant negative correlation between age and family income. Furthermore, there was a strong positive correlation found between residence and family income and size. Age showed an inverse correlation with fear of failure and a significant positive correlation with hope of success when the relationship between psychological and demographic variables was examined. Sagar and Jowet (2012) found a similar pattern, with junior female athletes reporting higher levels of this fear than their senior counterparts. This suggests that as athletes get older and gain more experience, their hope may grow. Furthermore, gender exhibited a significant positive correlation with fear of failure and a negative correlation with self-efficacy and self-regulation in both the pretest and post-test assessments. Ellison and Partridge's (2012) study revealed notable gender differences in fear of failure, with women reporting higher levels of fear than men. These results are consistent with the current findings. Research conducted by Eisenberg et al. (1996) and Harter (1998) also demonstrated that girls' negative self-evaluations tend to become more severe as they approach adolescence. A number of studies have found that there is a negative correlation between gender and self-efficacy, with men generally exhibiting higher levels of self-efficacy than women (Rattanakoses et al., 2009; Shelangoski, 2013; Spence et al., 2010). Gunzenhauser et al. (2017) found support for the present findings regarding a male advantage in self-regulation. Boys showed higher levels of both behavioral self-regulation and executive functioning during the school year, according to their study on the development of self-regulation in German elementary school students. This supports the theory that men may demonstrate greater self-regulation in specific situations.

Regarding the psychological measures, there were regular and noteworthy positive correlations observed between the general self-efficacy, self-regulation, and hope of success pretest and posttest scores. In contrast, fear of failure was significantly correlated in both the pretest and post-test assessments with low levels

of self-efficacy and self-regulation. Numerous research studies (Majzub & Yusuf, 2010; Duda & Nicholls, 1992; Elias et al., 2010; Kadhiravan, 2012) have reported findings supporting a positive relationship between general self-efficacy, self-regulation, and hope of success. Majzub and Yusuf's (2010) study on the relationship between self-efficacy, achievement motivation, and learning strategies found that there was a significant correlation between self-efficacy beliefs, achievement motivation, and self-regulated learning strategies. Furthermore, among college students, Elias, Noordin, and Mahyuddin (2010) found a strong relationship between self-efficacy and achievement motivation. Furthermore, Kadhiravan's (2012) study demonstrated a positive relationship between self-regulation and achievement motivation, confirming the observed relationships between Hope of Success and self-regulation.

Considering the relationships between demographic variables, psychological measures, and sports performance, age displayed a significant positive correlation with post-test performance. The current results are consistent with studies showing that athletes' abilities tend to increase with age and experience (Miller et al., 2018). As athletes engage in years of training and practice, they develop enhanced techniques and strategies, leading to better decision-making and a deeper understanding of the game. Furthermore, athletes' mental toughness and resilience tend to increase with age, allowing them to better handle stress, anxiety, and distractions and ultimately improving their performance in competitive environments (Lundman, 2007). Furthermore, in the pretest and post-test evaluations, pretest performance showed a strong positive correlation with both self-efficacy and self-regulation. This is consistent with findings from a number of studies, including those by Beauchamp et al. (2002), Lane (2004), and Moritz et al. (2001), which demonstrate the reciprocal relationships between performance and self-efficacy. Similarly, the current finding regarding the relationship between self-regulation and performance aligns with Toering’s et al.'s (2009) study, where they studied 159 elite and 285 non-elite youth soccer players. The study found that higher self-regulation scores in reflection and effort were associated with superior performance, particularly among elite players.

Independent and interactional effects of group, training, and achievement motivation on self-efficacy

With "group" representing professional athletes and non-athletes, "training" differentiating between those who received training and those who did not (no training), and "achievement motivation" classifying participants into high achievement motivation (HAM) and low achievement motivation (LAM), an attempt was made to investigate the independent and interaction effects on self-efficacy. ANCOVA was first taken into consideration for the analysis in an effort to understand their effect on self-efficacy. However, the data deviated from parametric assumptions of normality and homogeneity. Consequently, robust non-parametric statistical tests, including the Mann-Whitney U-test, Wilcoxon signed-rank test, Kruskal-Wallis, and Steel-Dwass test, were utilized to assess self-efficacy. With an emphasis on both independent and interaction effects, these non-parametric tests offered a comprehensive investigation of the effects of achievement motivation, training, and groups on self-efficacy.

Effects of Groups (Sports and Non-Sports) on Self-Efficacy:

The sport group showed a higher mean rank than the non-sport group, indicating a positive impact of sports engagement on self-efficacy. The Mann-Whitney U test results showed a significant independent effect of groups on self-efficacy post-test. The findings from the studies conducted by Beets et al. (2010), Wen and Beihe (2020), and Jingtao et al. (2022) provide valuable support for the observed results of the Mann-Whitney U test, emphasizing the positive impact of regular physical exercise on exercise motivation and general self-efficacy.The research by Beets et al. (2010), Wen and Beihe (2020), and Jingtao et al. (2022) aligns with the idea that engaging in regular physical activity, particularly through sports, not only contributes to physical health but also plays a crucial role in fostering mental well-being. Fox (1999), Jewett et al. (2014), and Doré (2019) all provide evidence in support of this, pointing out that exercise causes endorphins to be released, which enhances mood, lowers stress and anxiety, and increases overall well-being.

Effects of Achievement Motivation (LAM and HAM) on Self-Efficacy:

The mean rank comparison indicated a significant difference in self-efficacy between the High Achievement Motivation (HAM) and Low Achievement Motivation (LAM) groups in both the pre-test and post-test, with the HAM group consistently showing higher mean ranks. This highlights the critical role of achievement motivation in shaping how individuals perceive their capabilities and potential for success. According to Schunk (1995), self-efficacy predicts motivation and performance, which is consistent with our findings that higher self-efficacy was seen in those with HAM. Similar studies have highlighted that individuals with high achievement motivation (HAM) excel by employing techniques like goal-setting, persistence, and engaging in a positive feedback loop, thereby strengthening their self-efficacy (Kaynak et al., 2014; Atkinson and Feather, 1966). Meece, Blumenfeld, and Hoyle's (1988) work on task-mastery goals further supports that those with achievement motivation engage actively with tasks, enhancing their self-efficacy.

Interaction Effect of Groups and Training on Self-Efficacy:

In the post-test, the Kruskal-Wallis test revealed a significant interaction between the groups. Further analysis with the Steel-Dwass test confirmed higher self-efficacy in both sport groups, whether trained or not, compared to the non-sport group without training. The observed differences in the independent effect analysis between the sports and non-sports groups aligned with this pattern of differences, indicating that the effects of sports participation extended to the interaction effect. (Yuqin, 2019; Meece et al., 1988; Qin et al., 2017).

Interaction Effect of Groups and Achievement Motivation on Self-Efficacy:

In the pre-tests, individuals with high achievement motivation consistently demonstrated higher self-efficacy, regardless of sports involvement. The research highlights the value of both athletics and high-achievement motivation for self-efficacy. Engaging in sports activities consistently demonstrates benefits for physical and mental well-being, providing opportunities for setting goals and receiving structured feedback. Elevated levels of self-efficacy are a result of this special

combination of factors that are frequently lacking in non-sports environments (Beets et al., 2010; Wen & Beihe, 2020; Yuqin, 2019). Highly achievement-motivated individuals tend to actively pursue ambitious goals and persistently overcome challenges, which contributes significantly to their elevated self-efficacy. Their ability to consistently set and meet difficult goals builds a self-reinforcing mechanism that boosts their self-esteem and drive for success (Kaynak et al., 2014; Atkinson & Feather, 1966; Meece et al., 1988).

Interaction Effect of Training and Achievement Motivation on Self-Efficacy:

The Kruskal-Wallis test revealed a significant interaction effect on post-test self-efficacy between "Training and Achievement Motivation." The Steel-Dwass test revealed that individuals with high achievement motivation, irrespective of training, exhibited higher self-efficacy compared to individuals with low achievement motivation. This is consistent with the independent effect, which highlights the steady impact of strong achievement motivation on high levels of self-efficacy. Research conducted by Locke and Latham (1990) through a comprehensive meta-analysis involving over 100 studies spanning diverse domains such as work settings, education, and sports consistently demonstrated a substantial positive correlation between individuals with high achievement motivation (HAM) and elevated self-efficacy. Similarly, Bandura's (1986) research supports these results by demonstrating that people who have a high drive for success also typically have higher levels of self-efficacy. Collectively, these studies substantiate the conclusion that high achievement motivation contributes to increased levels of self-efficacy across various contexts.

Interaction effect of "Groups, Training, and Achievement Motivation" on Self-Efficacy Pre-test Post-test:

In the pretest, both non-sport training and non-sport no-training groups, as well as the sport no-training group with HAM, had greater mean ranks compared to the sport training, non-sport training, and non-sport no-training groups with LAM. Additionally, compared to non-sport no-training with low achievement motivation

(LAM), sport training with high achievement motivation (HAM) had a higher mean rank. In contrast to the non-sport training and no-training groups, which exhibited LAM, the sport training and no-training groups, as well as the non-sport training and no-training groups, all displayed higher levels of self-efficacy in the post-test. The result indicates that the impact of high achievement motivation (HAM) on self-efficacy was apparent in both the pretest and post-test phases. Interestingly, though, the training effect on self-efficacy was not seen, indicating that, independent of training participation, an inherent desire for achievement shapes self-efficacy in a significant way. Unlike previous research, such as those conducted by Walter et al. (2019) and Garvin (2014), which highlighted the positive influence of psychological skills interventions on self-efficacy, the present study revealed contrasting results. Consistent with the current research, which shows that achievement motivation affects self-efficacy, studies by Zhang et al. (2015), Elias et al. (2010), and Hodges & Kim (2010) also reported similar outcomes.

Independent and interactional effects of group, training, and achievement motivation on self-regulation

In the analysis of self-regulation, ANCOVA was conducted, which successfully met the assumptions of normality and homogeneity, ensuring the appropriateness and accuracy of the statistical analysis. The pre-test scores of self-regulation show a significant effect on the post-test scores of self-regulation with a reasonably high effect size. On the post-test of self-regulation, a significant interaction effect between "Groups x Training" and the independent effect of "Groups" (Sports vs. Non-Sports) was observed.

Effects of Groups (Sports and Non-Sports) on Self-Regulation:

The findings of the analysis of covariance indicated a statistically significant difference in the self-regulation post-test scores between athletes and non-athletes. Participants in the sports group exhibited a notably higher mean score in self-regulation compared to those in the non-sports group, implying that active participation in sports potentially contributes to the development and enhancement of

self-regulation skills. These results are in line with other studies, including those by Kitsantas and Zimmerman (2002) and Kitsantas and Kavussanu (2011), which found that playing sports was related to improved self-regulation skills.

Interaction effect of groups and Training on self-regulation:

The ANCOVA analysis revealed significant differences in the interaction between training and group for self-regulation. The sport group that got motivational training outperformed both the non-sport training and no-training groups in terms of mean self-regulation, according to post hoc analysis using the Scheffe test. This finding reveals that motivational training has a significant impact on the self-regulation of the sports group, while the training seems to not have a significant impact on the non-sport groups. Similar to the present finding, Maydokina and Kudashkina (2014) also found enhanced self-regulation in junior athletes through the "Mental Self-Regulation in Sport" program, emphasizing the effectiveness of psychological interventions in improving self-regulation skills. Sharp et al. (2013) also found that a mental skills training (MST) program for adolescent elite rugby athletes significantly increased self-regulation, fostering transparency, honesty, and improved management of rugby performance.

Also, Sport No-Training showed a higher mean rank compared to Non-Sport with Training, implying that inherent characteristics of sports involvement contribute to self-regulation development even without specific training, while the training showed no significance for non-sports. This finding is in contrast to McCrory's (2013) study on military pilot trainees, a non-sport population, where psychological skills training increased the participants' self-regulation behavior.

Effect of Motivational Training on the Performance of Professional Sportsmen

ANCOVA was used to investigate the impact of motivational training on professional athletes' performance. The results of the analysis demonstrated that "Training" (Training vs. No Training) had a statistically significant independent effect on post-test performance, highlighting the significance of motivational training in improving professional athletes' performance outcomes. The results are consistent

with earlier studies on how psychological skill interventions affect athletes' performance. Thelwell et al. (2006) found that training in psychological skills improved the performance of soccer midfielders. In a similar vein, after participating in a psychological skills training program, Sheard and Golby (2006) reported improved swimming performance and favorable psychological attributes. According to Thomas and Fogarty's (1997) research, amateur golfers' performance improved following imagery and self-talk training. These studies collectively support the finding that techniques akin to motivational training can contribute to performance improvements in sports.

The results and findings of this study can be summarized in relation to the theoretical expectations (hypotheses) put forth as follows:

1. The original version of the scales showed higher levels of scores on self-efficacy, self-regulation, and achievement motivation compared to the translated version of the scales.

2. The pre-test and post-tests of general self-efficacy and self-regulation showed positive relationships in all possible combinations. The pretest of performance showed a significant positive correlation with self-efficacy and self-regulation (pretest and post-test).

3. Professional sportsmen scored significantly higher in self-efficacy and self-regulation compared to non-sportsmen.

4. Among the sport groups, those who received training scored higher mean scores in self-regulation. However, a similar result was not found for the non-sport group, suggesting that training had a positive impact on these factors specifically within the sport context.

5. Non-sport participants with high achievement motivation showed higher self-efficacy compared to both sports and non-sports participants with low achievement motivation.

6. Sport groups with high achievement motivation also exhibited higher self-efficacy compared to sports and non-sports participants with low achievement motivation.

7. Professional sportsmen who received motivational training showed higher mean scores in performance compared to sportsmen who did not receive the training.

The results underscore the beneficial effects of sports involvement, motivational training, and high levels of achievement motivation on an individual's self-efficacy, self-regulation, and overall performance. This indicates that engaging in sports, receiving targeted training, and possessing a strong drive for achievement can positively shape an individual's belief in their abilities, their capacity for self-control, and their overall performance across various domains.

Limitations of the study

Although the study offers insightful information, there are certain important limitations to take into account. Firstly, the examination of external factors, including support systems, coaching dynamics, and individual circumstances, was not extensively explored, potentially limiting the comprehensive understanding of these influential components of the studied phenomena.

Second, the study was carried out in difficult COVID-19 pandemic conditions, which brought unexpected time constraints and challenges with data collection and participant availability. Because of the pandemic's disruptive effects, the data collection window was shortened, which affected the scope and depth of the study's observations. Furthermore, participants' psychological states and responses may have been affected by the pandemic's restrictions, adding an unpredictable variable to the study setting. It would be imperative to acknowledge these limitations in order to place the study's findings in the context of the larger body of sports psychology research.

Suggestions for future studies

A longitudinal study could be conducted to evaluate the long-term impacts of motivational training on Mizo athletes' self-efficacy, self-regulation, and

performance in order to gain a deeper understanding. This approach would offer valuable insights into the sustainability of the training's impact over an extended period.

Additionally, exploring the influence of motivational training on the psychological facets of injury rehabilitation among Mizo athletes is recommended. This investigation should specifically consider the role of self-efficacy in the recovery process, shedding light on how psychological interventions can contribute to athletes' overall well-being during rehabilitation.

Furthermore, using a mixed-methods research design could lead to a more comprehensive understanding. Researchers can record both the objective results and the subjective experiences connected to Mizo athletes' motivational training by integrating qualitative and quantitative methods. This integrated methodology would provide a richer and more comprehensive perspective on the effectiveness of such training programs.

Implications of the study

The study's findings hold several implications for the realms of sports training, mental health support, and evidence-based practices. First, it appears that incorporating motivational training into athlete development programs is a viable way to improve performance in terms of self-efficacy and self-regulation. This insight suggests that coaches and sports organizations should consider incorporating these techniques to optimize training protocols.

Moreover, recognizing the connection between self-efficacy and mental health, the study advocates for the use of motivational training as a preventive measure against issues such as anxiety and eating disorders among athletes. This highlights the potential dual impact of psychological interventions on fostering both performance and mental well-being.

The empirical evidence gathered in this study serves as a foundation for promoting evidence-based practices in sports psychology. It encourages a shift

toward a more informed and scientifically grounded approach to psychological training in the athletic domain. Furthermore, the study's insights can inform the development of athlete support programs that specifically target enhancing self-belief, self-control, and overall psychological well-being. This holistic approach aims to support athletes not only in their performance but also in their overall welfare.

Coaches can benefit from the study's recommendations by incorporating motivational training techniques into their coaching and training strategies. This integration is anticipated to contribute to the development of more resilient and high-performing athletes.

Motivational training could be a valuable asset for school and college sports programs, offering potential benefits for enhancing the performance and overall development of not only professional sportsmen but also sport students enrolled in schools and colleges.

Lastly, the research contributes to the advancement of sports psychology by underscoring the pivotal role of psychological factors in athlete development and success. This emphasis calls for further exploration and research in the evolving field of sports psychology.

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APPENDICES

APPENDIX-I

DEMOGRAPHIC PROFILE

1. ☐ Mipa ☐ Hmeichhia
2. Kum: _____
3. Nu leh Pa: ☐ Innei ☐ Nupui/Pasal sun ☐ Inthen
4. Chenna in: ☐ Mahni in ☐ Mi in luah
5. Chhungkawcheng ho zat: _____
6. Thlatin a chhungkaw sum lakluhzawngzawng belhkhawm: Rs. _____

APPENDIX-II (a)

ACHIEVEMENT MOTIVES SCALE (MIZO)

A hnuaia dinhmun hrang hrangte hi uluk takin chhiar la, I nihna a nih leh nih loh entirtu chhanna I thlang dawn nia.		Pawm lo hul hual	Pawm lo	Pawm	Pawm thlap
1.	Ka thei tih ka inhriatchhuah theihna hmuna awm hi nuam ka ti.	1	2	3	4
2.	Ka chinfel theih tur nia ka hriat harsatna ka tawhin, chingfel tura hmalak vat ka duh thin.	1	2	3	4
3.	Ka thiamna leh theihna hman tangkai theihna hmuna awm hi nuam ka ti.	1	2	3	4
4.	Ka thiamna leh theihna finfiah a nihna hmuna awm hi nuam ka ti.	1	2	3	4
5.	Ka thiamna leh theihna finfiah theihna/tihtur ka thlang thin.	1	2	3	4
6.	Mawhphurhna sang tak ka lak laiin dinhmun harsa takin min tlakbuak ang tih ka hlau thin.	1	2	3	4
7.	Ka hlawhtling ngei ang tih ka chian ngam loh thil chu tih mai ka hreh thin.	1	2	3	4
8.	Ka hlawhchham tih hre tur awm lo mahse, ka thiam loh zawng tih tur hmachhawn ka hreh thin.	1	2	3	4
9.	Tuman min hmu lo mahse, thil thar ka tawn hian ka awm a nuam lo thin.	1	2	3	4
10.	Thil eng emaw ka hriatthiam loh a awmin ka mangang mai thin.	1	2	3	4

APPENDIX-II (b)

ACHIEVEMENT MOTIVES SCALE

Below are ten statements about yourself which may or may not be true. Indicate your agreement using the scale presented,		Totally Disagree	Disagree	Agree	Totally Agree
1.	I like situations in which I can find out how capable I am.	1	2	3	4
2.	When I am confronted with a problem, which I can possibly solve, I am enticed to start working on it immediately.	1	2	3	4
3.	I enjoy situations in which I can make use of my abilities.	1	2	3	4
4.	I am appealed by situation allowing me to test my abilities.	1	2	3	4
5.	I am attracted by tasks in which I can test my abilities.	1	2	3	4
6.	I am afraid of failing in somewhat difficult situations, when a lot depends on me.	1	2	3	4
7.	I feel uneasy to do something if I am not sure of succeeding.	1	2	3	4
8.	Even if nobody would notice my failure, I'm afraid of tasks, which I'm not able to solve.	1	2	3	4
9.	Even if nobody is watching, I feel quite anxious in new situations.	1	2	3	4
10.	If I do not understand a problem immediately I start feeling anxious.	1	2	3	4

APPENDIX-III (a)

GENERAL SELF-EFFICACY SCALE (MIZO)

A hnuaia dinhmun hrang hrangte hi uluk takin chhiar la, I nihna a nih leh nih loh entirtu chhanna I thlang dawn nia.		Diklo hul hual	Dik lo	Dik	Dik Thlap
1.	Theihtawp ka chhuah chuan harsatna engpawh ka chingfel thei thin.	1	2	3	4
2.	Min daltu awm mahse ka duh zawng neih theih dan kawng ka hre thin.	1	2	3	4
3.	Ka tumte hrechiangin awlsam takin hlawhtlinna ka nei thin.	1	2	3	4
4.	Thil engpawh lo thleng se tlin taka hmachhawn thei turin mahni inrintawkna ka nei.	1	2	3	4
5.	Thil engpawh lo thleng se hmachhawn turin theihna ka nei a ni.	1	2	3	4
6.	Theihtawp ka chhuah phawt chuan eng harsatna pawh ka chingfel thei thin.	1	2	3	4
7.	Harsatna ka tawh changin, chi ai mai lova hmachhawn theihna ka nei.	1	2	3	4
8.	Harsatna ka tawhin chin fel dan tur kawng hrang hrang ka hre thei mai thin.	1	2	3	4
9.	Buaina ka tawhin, chinfel dan tur kawng ka hre mai thin.	1	2	3	4
10.	Thil engpawh lo thleng se, ka hmachhawn thei fo thin.	1	2	3	4

APPENDIX-III (b)

GENERAL SELF-EFFICACY SCALE

Below are ten statements about yourself which may or may not be true. Indicate your agreement using the scale presented,		Not at all true	Hardly True	Moderately True	Exactly True
1.	I can always manage to solve difficult problems if I try hard enough	1	2	3	4
2.	If someone opposes me, I can find the means and ways to get what I want.	1	2	3	4
3.	It is easy for me to stick to my aims and accomplish my goals.	1	2	3	4
4.	I am confident that I could deal efficiently with unexpected events.	1	2	3	4
5.	Thanks to my resourcefulness, I know how to handle unforeseen situations.	1	2	3	4
6.	I can solve most problems if I invest the necessary effort.	1	2	3	4
7.	I can remain calm when facing difficulties because I can rely on my coping abilities.	1	2	3	4
8.	When I am confronted with a problem, I can usually find several solutions.	1	2	3	4
9.	If I am in trouble, I can usually think of a solution	1	2	3	4
10.	I can usually handle whatever comes my way.	1	2	3	4

APPENDIX-IV (a)

SELF-REGULATION SCALE (MIZO)

A hnuaia dinhmun hrang hrangte hi uluk takin chhiar la, I nihna a nihleh nihloh entirtu chhanna I thlang dawn nia.		Diklo hul hual	Dik lo	Dik	Dik Thlap
1.	A tul chuan, tihtur pakhatah rei tak ka rilru ka pe thei.	1	2	3	4
2.	Thil ka tih laklawh laiin ka rilru la pengtu a lo awm pawhin, awlsam takin ka chhunzawm leh thei thin.	1	2	3	4
3.	Ka thinlung khawih em em tihtur nei mah ila, rilru fimin ka hmachhawn thuai thei.	1	2	3	4
4.	Thinrimna chawk tho thei chi tihtur nei mah ila, ka thinrimna thununin ka ti thei thin.	1	2	3	4
5.	Tih tur ka neih laia rilru la peng thintute hi hnawhbo harsa ka ti thin.	1	2	3	4
6.	Hna ka thawhlaiin, ka rilru la peng theite lakah ka inthunun thei thin.	1	2	3	4
7.	Rilru a hah hi chuan ka tihturah rilru ka pe thei lo.	1	2	3	4
8.	Ka hnathawh lai khaihlak mahse, ka thawh chhunzawm leh thei mai thin.	1	2	3	4
9.	Rilru pe taka hna ka thawh theihna dal in ka ngaihtuahna a vak kual ruai thin.	1	2	3	4
10.	Ka thil tumah rilru ka pe a, eng dang mah hian ka tum daltir ka phal ngai lo.	1	2	3	4

APPENDIX-IV (b)

SELF-REGULATION SCALE

Below are ten statements about yourself which may or may not be true. Indicate your agreement using the scale presented,		Not at all true	Barely True	Moderately True	Exactly True
1.	I can concentrate on one activity for a long time, if necessary.	1	2	3	4
2.	If I am distracted from an activity, I don't have any problem coming back to the topic quickly.	1	2	3	4
3.	If an activity arouses my feelings too much, I can calm myself down so that I can continue with the activity soon.	1	2	3	4
4.	If an activity requires a problem-oriented attitude, I can control my feelings.	1	2	3	4
5.	It is difficult for me to suppress thoughts that interfere with what I need to do	1	2	3	4
6.	I can control my thoughts from distracting me from the task at hand.	1	2	3	4
7.	When I worry about something, I cannot concentrate on an activity.	1	2	3	4
8.	After an interruption, I don't have any problem resuming my concentrated style of working.	1	2	3	4
9.	I have a whole bunch of thoughts and feelings that interfere with my ability to work in a focused way.	1	2	3	4
10.	I stay focused on my goal and don’t allow anything to distract me from my plan of action.	1	2	3	4

APPENDIX-V

SPORT PERFORMANCE INDEX (Taekwondo)

Player's Name	Agility (10)	Speed (10)	Reaction (1 min)	Balance (1 min)	Total points

APPENDIX-VI

SPORT PERFORMANCE INDEX (Judo)

JUDO Player's Name	**SPARRING** (10)	**MOTOR ABILITY**					**SPEED THROW** **(10)**	**TECHNIQUE SHOW** **(10)**	**TOTAL POINTS (80)**
		Speed (10)	Strength (10)	Flexibility (10)	Endurance (10)	Agility (10)			

APPENDIX-VII

SPORT PERFORMANCE INDEX (Boxing)

Player's Name	Shadow Boxing	Sparring	Total Points

APPENDIX-VIII

SPORT PERFORMANCE INDEX (Karate)

Player's Name	Sparring (10 Pts)	Speed testing (10 Pts)	Kata dancing (10 Pts)	Total points
1.				
2.				
3.				
4.				

APPENDIX-IX

SPORT PERFORMANCE INDEX (Weightlifting)

Player's Name	Snatch	Clean and Jerk	Total points
1.			
2.			
3.			
4.			

APPENDIX-X

SPORT PERFORMANCE INDEX (Volleyball)

Player's Name	Service	Blocking	Spike	Defence	Communication	Fingering	Underarm pass	Timing	Agility	Total
	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	

APPENDIX-XI

SPORT PERFORMANCE INDEX (Football)

PLAYERS MIDFIELDER	**Pass Completed** *100%/90%/80%/70%/60%/50% = (6/5/4/3/2/1) Pt.	**Interception** *3 successful attempt= (1) *6 successful = (2) *9 successful = (3)	**Yellow Card** (-1)	**Red Card** (-3)	**Goals** (5)	**Assist** (3)	**Minutes played** *70+ minutes =2 pt (clean sheet= +1) *-70 mins- = 1 pt.	**Total Points**
1.								
2.								
PLAYERS FORWARD	**Shot On Target:** * 3 Success= (1) * 6 success= (2)	**Shot off target** * 3 = (-1) * 6 = (-2)	**Yellow Card** (-1)	**Red Card** (-3)	**Goals** (5)	**Assist** (3)	**Minutes played** *70+ minutes =2 pt *-70 mins- = 1 pt.	**Total Points**
1.								
2.								
PLAYERS DEFENDER	**Tackle Won+ Aerial Duel+ Interception+ Clearances+ Blocks**: *5 score = (1) pt3 successful attempt= (1) *6 successful= (2) *9 successful= (3).	**Penalty Conceded** (-2)	**Yellow Card** (-1)	**Red Card** (-3)	**Goals** (5)	**Assist** (3)	**Minutes played** *70+ minutes =2 pt (clean sheet= +3) *-70 mins- = 1 pt.	**Total Points**
1.								
2.								
PLAYERS KEEPER	**Saves made** *3 save= (1) *6 save=(2)	**Goals Conceded** *2 goals= (-1) *4 goals=	**Yellow Card** (-1)	**Red Card** (-3)	**Penalty Saved** *1 save=	**Assist** (3)	**Minutes Played:** *70+	**Total Points**

		(-2)			(3) *2 save= (6)		mins= (2) (clean sheet = +4) *70 - = (1)	
1.								
2.								

BIO-DATA

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1	HSLC	2008	MBSE	-	73.6
2	HSSLC	2010	CBSE	Humanities	85
3	Graduation	2013	Delhi University	Psychology(hons)	48.75
4	Post-Graduation	2015	Mizoram University	Psychology	72.05
5	M.Phil	2017	Mizoram University	Psychology	8.33
6	UGC NET	2018			

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DEGREE	:	Doctor of Philosophy
DEPARTMENT	:	Psychology
TITLE OF THE THESIS	:	Impact of Motivational training on Self-efficacy, Self-regulation and Performance of Mizo Professional Sportsmen
DATE OF ADMISSION	:	25.07.2018

APPROVAL OF RESEARCH PROPOSAL

1. DRC	:	22.03.2019
2. BOS	:	28.03.2019
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MZU REGISTRATION NO	:	232 of 2014
Ph.D. REGISTRATION NO. & DATE	:	MZU/Ph.D./1278 of 25.07.201
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ABSTRACT

IMPACT OF MOTIVATIONAL TRAINING ON SELF-EFFICACY, SELF-REGULATION AND PERFORMANCE OF MIZO PROFESSIONAL SPORTSMEN

AN ABSTRACT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

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DEPARTMENT OF PSYCHOLOGY

SCHOOL OF SOCIAL SCIENCES

MAY, 2024

IMPACT OF MOTIVATIONAL TRAINING ON SELF-EFFICACY, SELF-REGULATION AND PERFORMANCE OF MIZO PROFESSIONAL SPORTSMEN

BY

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Submitted

In partial fulfillment of the requirement of the Degree of Doctor of Philosophy in Psychology of Mizoram University, Aizawl.

Sports, which have become a global phenomenon, significantly contribute to physical and mental well-being (Kim & McKenzie, 2014; Fox, 1999). In keeping with the trend, India has a long history of participation in sports and enjoys a wide range of sports, including hockey, table tennis, kabaddi, cricket, basketball, and athletics (Koji, 2023).

Amidst this diversity, professional sportsmen face unique challenges impacting their mental health (García-Santos et al., 2021). Sport psychology explores how physical activity, exercise, and sports promote wellbeing and personal development (LeUnes and Nation, 2002). Psychological factors have a significant impact on sports performance, making psychological skills training (PST) essential (Alderman, 1974).

Northeastern India's Mizoram province is set apart by its hilly topography and pleasant weather (Lodrick, 2023). The Mizo, also known as "highlanders," have English and Mizo as official languages, reflecting their rich cultural diversity (Nunthara, 1996; Ministry of Development of the North Eastern Region, n.d.). Sports have been integral to Mizoram's culture, providing not only a deep-seated love for various sports but also serving as a significant source of employment (Thadou, 2020; Express Web Desk, 2020).

In addition to traditional Mizo games, the state has seen an increase in professional and recreational sports across a variety of disciplines, including football, basketball, and badminton (Lalbiakzarzovi, 2017). Recognizing the passion for sports, Mizoram's authorities are committed to nurturing the talents of the Mizo youth through dedicated initiatives (Lalbiakzarzovi, 2017).

Given the cultural significance of sports in Mizoram, there is a compelling need for studying the psychological aspects of sports performance. The growing engagement of Mizo individuals in sports, combined with state authorities' commitment to fostering sports talents, sets the stage for exploring the impact of psychological skills training. The objective of this research is to address a research gap in the area and offer significant perspectives to the wider understanding of sports

psychology in various cultural settings. The findings have the potential to shape tailored psychological training programs that resonate with Mizoram's cultural nuances, thereby enhancing the overall well-being and performance of athletes in the region.

Sports are a multifaceted physical activity that can be engaged in individually or in groups (citation). Sports, which require skill, physical effort, and competitiveness at various levels, are beneficial to one's physical and mental health (Malm, 2023). Psychological principles are critical in the development and progression of individuals involved in professional or recreational sports (APA, n.d.).

The psychological study of sports focuses on emotions, competitiveness, teamwork, accomplishments, and play. Competitive sports demand commitment and skill and expose players to high levels of physical, mental, and emotional stress. Individuals subjected to performance expectations and rules are classified as sports persons (Nisar, 2015). Professional athletes who make their living through high-level competitions face unique challenges, such as consistent performance pressure, injury risks, and the need for effective time and financial management (Garca-Santos et al., 2021). Anxiety, depression, and burnout are among the mental health issues that can arise from the pressures of being a professional athlete (Gouttebarge et al., 2021). It thus becomes crucial for them to have access to resources and support services in order to handle the pressures and stress of their line of work.

The study of sport psychology looks at how participating in physical activity, exercise, and sports can improve a person's overall wellbeing and personal development over the course of their life (LeUnes & Nation, 2002). It entails researching psychological elements that affect people's engagement in and performance in sports and using this knowledge to improve people's everyday lives (WHO, 2010). According to Alderman (1974), psychological preparation is still essential for enhancing athletic performance because it highlights the critical role that mental faculties play in competitive sports. Even though athletes understand how important mental toughness is, very few make the mental preparation that is required for success in sports (Bull et al., 1996; Weinberg & Williams, 2010). The interplay

of physical and psychological factors, along with understanding the preparation needed for mental readiness, underscores the importance of psychological considerations in the realm of sports. The term "Motivational Training" was used in place of "Psychological Skills Training (PST)" in the current study to emphasize and give clarity to the primary focus of the study, which was how training aimed at improving motivation could affect performance, self-efficacy, and self-regulation, especially in the context of achievement motivation (HAM and LAM). A well-known strategy for improving athletes' athletic performance is psychological skills training. This type of training aims to improve athletes' intrinsic motivation by providing them with a variety of cognitive and behavioral skills to help them stay focused, positive, and motivated during training and competition. Several studies have highlighted the effectiveness of Psychological Skills Training (PST) in enhancing athletes' performance. When Fournier et al. (2005) conducted a 10-month PST program, for example, female gymnasts' psychological skill development and gymnastic performance significantly improved as compared to non-participants. Males exhibit higher stress levels during training and performance compared to females, but another study by Madera et al. (2021) showed that PST can improve anxiety and anaerobic performance in college students. Furthermore, a study conducted in 2008 by Edwards highlighted the benefits that sport psychological skills training programs have for young athletes. It has been demonstrated that these interventions improve young athletes' psychological competencies, psychological health, and general athletic performance. Overall, the research points to psychological skills training and motivational training as a viable approach for enhancing athletes' performance; and further study is required in order to determine the specific aspects of the training that result in enhanced performance.

Objectives of the study:

Building upon the theoretical framework related to the research problem, the current study formulated the following objectives:

1. To examine the levels of the participant’s Self-efficacy, Self-regulation and Achievement Motivation.

2. To find out the relationship between the Self-efficacy, Self-regulation and performance of the participants in the study.

3. To compare the level of Self-efficacy, Self-regulation between the Professional Sportsmen and the non-sportsmen group

4. To determine the effect of motivational training on Self-efficacy and Self-regulation of the participants.

5. To determine the effect of Achievement Motivation on Self-efficacy and Self-regulation of the non-sportsmen.

6. To determine the effect of Achievement Motivation on Self-efficacy, Self-regulation and performance of the Professional Sportsmen.

7. To examine the effect of motivational training on the performance of the Professional Sportsmen.

Hypotheses:

1. The original version of the scales will show higher levels of scores on Self-efficacy, Self-regulation and Achievement motivation compared to the translated version of the scales

2. Positive correlation will emerge for Self-efficacy, Self-regulation and performance of the participants in all possible combination.

3. The Professional Sportsmen as compared to the non-sportsmen group would show higher level of scores on Self-efficacy and Self-regulation

4. The Training groups will show higher mean scores in Self-efficacy and Self-regulation compared to the No-training groups

5. Non-sportsmen with High Achievement Motivation will show higher mean scores in Self-efficacy and Self-regulation compared to Low Achievement motivation groups

6. Sportsmen with High achievement motivation will show higher mean scores in Self-efficacy and Self-regulation compared to Low Achievement motivation groups

7. Professional Sportsmen who received the training will show higher mean scores in performance compared to the sportsmen who did not receive the training

Psychological tools utilized in this study included the Achievement Motives Scale (Lang & Fries, 2006), a 10-item scale assessing hope of success and fear of failure; the General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995), consisting of 10 items measuring perceived self-efficacy in coping with stressful life events; the Self-Regulation Scale (Schwarzer et al., 1999), a 10-item measure evaluating individuals' self-regulation abilities; and the Sport Performance Index, a customized index developed based on literature review and expert consultations for assessing sport performance.

Design of the study employed was 2 'Sportsmen' (Professional Sportsmen vs. Non-Sportsmen) x 2 'Achievement Motivation' (Low vs. High Scorers) x 2 'Motivational Training' (Training vs. No-Training). Therefore, the 2x2x2 factorial design (Sportsmen x Achievement Motivation x Motivational Training) was imposed on self-efficacy and self-regulation for the overall design. The main study had three phases: baseline, intervention, and evaluation.

Sample of the study included a total of 323 participants, including 122 professional sportsmen and 131 non-sportsmen, were selected for the baseline phase of the study. The data collected from these participants were sorted based on their achievement motivation ratings, using the median split method to categorize them into low and high achievement motivation groups. The chosen age bracket of 13–30 aligns with the youth demographic targeted by sports development initiatives in India, including Mizoram (Ministry of Youth Affairs and Sports, 2021).

Statistical Analyses:

After identifying and managing outliers, parametric statistics were utilized in the study. Reliability tests, including Cronbach's alpha, were employed for internal consistency assessment, while descriptive statistics characterized the variables. Pearson's product-moment correlation coefficient was used to explore relationships among demographic variables, self-regulation, achievement motivation, self-efficacy, and performance. The primary analysis involved a three-way analysis of covariance (ANCOVA), using pre-test measures as covariates. To accommodate the non-parametric assumptions of the General Self-Efficacy Scale, alternative tests like the Mann-Whitney U-test, Wilcoxon signed-rank test, Kruskal-Wallis test, and Steel-Dwass test were conducted.

Levels of the participant's self-efficacy, self-regulation, and achievement motivation:

The study assessed participants' levels of self-efficacy, self-regulation, and achievement motivation using various scales. The General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995) was employed in both the original and translated (Mizo) versions to measure self-efficacy. The Mizo version exhibited slightly lower mean scores but greater consistency, possibly influenced by the collectivistic orientation of Mizo society, as observed in prior research (Jurecska et al., 2011; Ahn et al., 2016).

The Self-Regulation Scale (SRS; Schwarzer, Diehl, & Schmitz, 1999) was used to assess self-regulation, revealing that the original version had a higher mean score than the translated one. The narrower standard deviation in the Mizo version suggested more consistent self-regulation within the cultural context, aligning with findings from studies on cultural variations in self-regulation (Kizilcec & Cohen, 2017; Kurman, 2001).

Relationship between demographic variables, self-efficacy, self-regulation, and performance for the overall samples:

Examining Hope of Success (HOS) and Fear of Failure (FOF) scores using the AMS-R scale across different versions revealed cultural patterns. The original version showed higher mean scores for HOS and lower mean scores for FOF, indicating a stronger sense of hope for success and lower fear of failure among participants. The translated version for the Mizo population exhibited narrower standard deviations, indicating greater response consistency within the Mizo context. This aligns with previous research emphasizing cultural influences on achievement motivation, particularly lower levels in collectivistic societies (Sagie et al., 1996).

The study explored relationships between demographic variables, psychological measures (self-efficacy, self-regulation, hope of success, fear of failure), and sports performance. Notable findings include a negative correlation between age and family income, a positive correlation between residence and family income and size, and a positive correlation between age and hope of success. Gender showed correlations with fear of failure (positive) and self-efficacy and self-regulation (negative). Similar gender differences in fear of failure and self-efficacy align with previous research.

Psychological measures revealed positive correlations between general self-efficacy, self-regulation, and hope of success. Conversely, fear of failure correlated negatively with self-efficacy and self-regulation. These findings support existing literature on the positive relationships between self-efficacy, self-regulation, and achievement motivation.

Examining the relationship between demographic variables, psychological measures, and sports performance, age exhibited a positive correlation with post-test performance, consistent with age-related improvements in athletes' abilities. Pretest performance correlated positively with self-efficacy and self-regulation, emphasizing the reciprocal relationship between psychological factors and performance. The

study's outcomes align with previous research indicating the influence of self-regulation on sports performance.

Independent and interactional effects of group, training, and achievement motivation on self-efficacy:

ANCOVA was considered to examine the impact of achievement motivation, training, and group (professional athletes vs. non-athletes) on self-efficacy. However due to data deviations from parametric assumptions, robust non-parametric tests (Mann-Whitney U-test, Wilcoxon signed-rank test, Kruskal-Wallis, and Steel-Dwass test) were employed. These tests were chosen to thoroughly explore both independent and interaction effects of achievement motivation, training, and group on self-efficacy, providing a comprehensive analysis despite the non-parametric nature of the data.

Effects of Groups (Sports and Non-Sports) on Self-Efficacy:

The study investigated the impact of groups (sports and non-sports), achievement motivation (HAM and LAM), and training on self-efficacy. The Mann-Whitney U test revealed that the sport group exhibited significantly higher self-efficacy post-test, aligning with findings from Beets et al. (2010), Wen and Beihe (2020), and Jingtao et al. (2022), emphasizing the positive influence of regular physical activity on self-efficacy.

Effects of Achievement Motivation (LAM and HAM) on Self-Efficacy:

A significant difference in self-efficacy between HAM and LAM groups was observed in both pre-test and post-test, with the HAM group consistently showing higher mean ranks. This underscores the pivotal role of achievement motivation in shaping individuals' perceptions of their capabilities and success potential, consistent with Schunk (1995).

Interaction Effect of Groups and Training on Self-Efficacy:

In the post-test, a Kruskal-Wallis test revealed a significant interaction effect between groups. Both trained and untrained sport groups exhibited higher self-efficacy compared to the non-sport group without training. The result reveals that sports participation positively influenced self-efficacy, regardless of training, supported by studies by Yuqin (2019) and Meece et al. (1988).

Interaction Effect of Groups and Achievement Motivation on Self-Efficacy:

Similarly, individuals with HAM demonstrated higher self-efficacy in pre-tests, irrespective of sports involvement. This highlighted the combined benefits of sports activities and high achievement motivation for mental and physical well-being, with research supporting this unique synergy (Beets et al., 2010; Wen & Beihe, 2020; Yuqin, 2019).

Interaction Effect of Training and Achievement Motivation on Self-Efficacy:

The Kruskal-Wallis test revealed a significant interaction effect in post-test self-efficacy between "Training and Achievement Motivation." Individuals with HAM, regardless of training, exhibited higher self-efficacy, in line with studies by Locke and Latham (1990) and Bandura (1986), confirming the positive correlation between HAM and elevated self-efficacy.

Interaction effect of "Groups, Training, and Achievement Motivation" on Self-Efficacy Pre-test Post-test:

In the pretest, both non-sport training and no-training groups, along with the sport no-training group with HAM, showed higher mean ranks compared to the sport training, non-sport training, and non-sport no-training groups with LAM. The impact of HAM on self-efficacy was evident in both pretest and post-test phases, independent of training participation. This contrasted with some previous research, emphasizing the powerful influence of inherent achievement motivation on self-efficacy (Zhang et al., 2015; Elias et al., 2010; Hodges & Kim, 2010).

Independent and interactional effects of group, training, and achievement motivation on self-regulation

In the examination of self-regulation, ANCOVA was employed, meeting assumptions of normality and homogeneity. Pre-test scores significantly influenced post-test self-regulation scores, indicating a substantial effect size. An interaction effect between "Groups x Training" and the independent effect of "Groups" (Sports vs. Non-Sports) emerged on the post-test of self-regulation.

Effects of Groups (Sports and Non-Sports) on Self-Regulation:

The analysis revealed a significant difference in post-test self-regulation scores between sports and non-sports participants. The sports group demonstrated notably higher self-regulation, aligning with studies by Kitsantas and Zimmerman (2002) and Kitsantas and Kavussanu (2011), emphasizing the positive association between sports participation and enhanced self-regulation skills.

Interaction Effect of Groups and Training on Self-Regulation:

ANCOVA indicated significant differences in the interaction between training and group for self-regulation. The sports group with motivational training outperformed non-sport groups in self-regulation, highlighting the effectiveness of motivational training in sports. The study contrasts McCrory's (2013) findings, suggesting inherent characteristics of sports involvement contribute to self-regulation development, even without specific training.

Effect of Motivational Training on the Performance of Professional Sportsmen:

ANCOVA assessed the impact of motivational training on professional athletes' performance, revealing a significant independent effect of "Training" on post-test performance. This aligns with studies demonstrating the positive influence of psychological skill interventions on athletes' performance, supporting the notion that motivational training contributes to performance improvements in sports (Thelwell et al., 2006; Sheard and Golby, 2006; Thomas and Fogarty, 1997).

Limitations of the Study: While the study provides valuable insights, it has limitations. External factors like support systems and coaching dynamics were not extensively explored, potentially limiting the understanding of these influential components. The study faced challenges due to the COVID-19 pandemic, leading to time constraints and disruptions in data collection. The pandemic may have impacted participants' psychological states, adding an unpredictable variable.

Suggestions for Future Studies: Future studies could include a longitudinal approach to assess the long-term impact of motivational training on Mizo athletes. Exploring the influence of such training on the psychological facets of injury rehabilitation is recommended. Using a mixed-methods research design, combining qualitative and quantitative methods, could offer a more comprehensive understanding.

Implications of the Study: The findings have implications for sports training, mental health support, and evidence-based practices. Incorporating motivational training into athlete development programs is seen as beneficial for improving performance in self-efficacy and self-regulation. Recognizing the link between self-efficacy and mental health, the study advocates for using motivational training as a preventive measure against issues like anxiety and eating disorders among athletes. Coaches and sports organizations are encouraged to integrate these techniques into their training protocols.

Moreover, the study underscores the importance of evidence-based practices in sports psychology, promoting a scientifically grounded approach to psychological training. This approach aims to support athletes not only in their performance but also in their overall well-being. Coaches can benefit by incorporating motivational training techniques into their coaching strategies, fostering the development of resilient and high-performing athletes. The potential benefits extend beyond professional sports to school and college sports programs.