FACTORS AFFECTING PERFORMANCE OF ATHLETES

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ABSTRACT

Psychopathology and performance in sports are said to have an inverse relationship, as stated by the Mental Health Model (MHM) of athletic performance. The concept of the model, which states that an athlete's performance should either decline or rise depending on whether their mental health is improving or suffering, is currently supported by a significant amount of evidence. Generally speaking, when it comes to selecting athletes, generic psychological evaluations of personality structure and mood state have the potential to detect between 70 and 85 percent of successful and unsuccessful athletes. Even if this level of accuracy is higher than the probability of occurrence, it is not sufficient. The findings of longitudinal MHM research reveal that there is a dose-response relationship between the amount of training load and the mood state reactions of athletes. This discovery has the potential to reduce the incidence of staleness syndrome in athletes who participate in strenuous physical exercise. Due to the fact that support services have solely been concerned with the prevention and treatment of physical disorders up to this point, the MHM also has an impact on the healthcare that athletes receive in general. A number of authors have recently expressed skepticism over the validity of the MHM, despite the fact that it is founded on a straightforward concept and is supported by empirical evidence. In the field of sport psychology, the MHM has been misunderstood in a significant number of instances. The goal of this review is to present a summary of the research that has been done on MHM, including any ongoing efforts to resolve conflicts by addressing the dynamic components of the model.

Keywords: *athletes, factor, performance*

INTRODUCTION

When attempting to determine what factors contribute to an athlete's performance, sports medicine has traditionally placed a strong emphasis on biological factors; nevertheless, psychological factors have also played a key part from the very beginning. According to Dudley, "the mental qualities of the athlete figure largely in all success in athletics" (an article on the psychology of the athlete published in 1888), these qualities are a significant factor in the performance of athletes. On the other hand, assertions such as this could not be assessed in an objective manner until trustworthy psychological tests were created. A significant number of the earliest studies in the field of sport psychology focused on examining the relationship between

personality traits and athletic performance or participation in sports. Personality characteristics are defined as distinctions that are relatively persistent among individuals in specific inclinations to interpret the environment in a particular way and in dispositions to react or behave in a specified manner with predictable regularity. These tendencies and dispositions can be observed in people. There is ongoing discussion on the fundamental elements that comprise the structure of a person's personality; however, the majority of personality tests incorporate features of emotionality (such as emotional stability-neuroticism) and social adaptation.

According to evaluations of the sport psychology literature that were published in the 1960s, it was discovered that participation in sports and athletic achievement were shown to have a mildly favourable correlation with personality qualities such as emotional stability and extroversion. Sport psychologists are of the opinion that the correlation is significantly higher than previously thought. As an illustration, Ogilvie and Tutko have stated that "outstanding athletes can be identified by a number of common, desirable personality characteristics" in their development of the Athletic Motivation Inventory, which is a personality test that is specifically designed for athletes. Despite the fact that this unduly credulous stance on the efficacy of personality has been disproven in the past, personality tests continue to be one of the numerous psychological tests that are widely used in the United States to select players for professional teams.

Additionally, the core concept of the model can be presented in the following manner: A correlation between enhanced mental health and increased athletic achievement ought to be established. It is therefore reasonable to anticipate that successful athletes will exhibit favourable psychological attributes such as emotional stability, low trait anxiety, and strong psychic vigour. Other evaluations of the model have, for the most part, failed to address the dynamic aspect of the MHM, which refers to the impact that shifts in mental health over the course of time have on performance. Intense physical training frequently produces mood disorders and performance decreases, according to research on this component of the MHM. This is the case even in athletes who have strong mental health profiles during the off-season or during periods of easy training.

When it comes to sport psychology literature, the MHM has been repeatedly misinterpreted, despite the fact that its notion is basic and its conceptual simplicity is straightforward. The ability of the model to identify successful athletes has been exaggerated on occasion by reviewers. They have argued that the model ought to be able to distinguish "fine grain distinctions" or misquoted Morgan to claim that the findings of the MHM study provide support to the credulous position. The validity of the MHM has been called into question by Meyers et al., who have asserted that the model predicts that elite athletes should never exhibit poor mental health. This assertion is based on a similar mistake. On the other hand, Morgan has pointed out on multiple occasions that the accuracy of the model was "far from perfect" and "not acceptable for selection purposes," and that the psychological variables that were used to build the MHM are only moderately associated with athletic performance. Furthermore, the dynamic component of the MHM predicts that highly trained top athletes should have an increase in negative mood measures. This is a prediction that is based on the MHM.

The psychological components that served as the foundation for the MHM have also been misconstrued in the research that has been done on the subject. It is said by Vealey (page 46), for example, that the paradigm is problematic due to the fact that it "fails to focus on attributes of personality other than the absence of psychopathology."1. The fact that emotional stability and other positive psychological attributes were directly linked by Morgan, the inventor of the model, to successful athletes is not taken into consideration by this argument. Despite the fact that some reviewers have correctly pointed out that the MHM does in fact have a lot of desirable psychological characteristics, they have made the mistake of limiting the model to the association between performance and mood states. In conclusion, in contrast to Morgan's own research on the model, a number of academics have utilised the MHM in order to evaluate the impact of precompetition mood state evaluations on performance.

Misinterpretations of the MHM have unfortunately been provided in sport psychology textbooks on a regular basis, and they have been presented at face value. At this point in time, it is appropriate to conduct a review of the model because of their prominence. The next portion of this study will provide an overview of the most important findings that emerged from the MHM research. Due to the fact that this subject matter has not always been covered in past evaluations, the results of the dynamic component of the model research will also be provided. A distinction will be made between the nomothetic perspective of the MHM and an idiographic model of sport performance through the presentation of evidence about the influence of precompetition anxiety on performance. In the context of MHM research, the utilisation of mood state metrics will be encouraged, and some suggestions for expanding the model to incorporate more complex interactional or hierarchical models of behaviour will also be sent out.

Mental Health Model (MHM) Research

Twenty years ago, Morgan published an essay that provided a summary of the findings of eight different study projects involving players from a variety of sports. It was in that piece that he introduced the MHM and provided a detailed description of it. The abilities of the athletes ranged from pre-elite to elite or international level, and the sample size was anywhere from 16 to 735 individuals. In this particular study, one of the most prevalent methods that was utilised was to have the participants complete out standardised psychological assessments of their personality and mood. Following that, individuals were separated into two groups: those who were successful and those who were unsuccessful, based on pre-existing criteria such as starting position or the number of varsity letters received. In past studies, psychological examinations of athletes were used to determine their team status before they were picked for championship teams. Such evaluations were conducted before the athletes were recruited. At the same time that some research, such as Nagle et al., utilised discriminant function analysis to statistically predict success or failure, other studies, such as Morgan and Johnson, utilised objective clinical evaluations of the psychometric data in order to classify athletes prior to selection. Based on a ±1 standard deviation of the sample mean criterion, the clinical approach was utilised to make predictions regarding the success or failure of clinical procedures. In general, the statistical and clinical methods that were utilised to ascertain whether or not athletes were successful had an

accuracy rate that ranged from seventy to eighty-five percent, with an average of approximately eighty percent. In addition, regression studies provided findings that fell within the moderate range (for example, the multiple regression coefficient was equal to 0.73), and statistical tests consistently demonstrated that these prediction rates were superior to those that were achieved just through the process of chance.

According to the findings of these research, when athletes with varying degrees of performance were compared, those with higher levels of mental health had better mental health overall. As part of this, assessments of emotional steadiness and mood state were carried out. Not only did athletes who succeeded in their sport have above-average levels of energy, but they also had below-average levels of stress, despair, fury, tiredness, and confusion. Additionally, they had above-average levels of energy. Morgan coined the phrase "iceberg profile" to describe the shape that mood scores had when displayed graphically in T-score units. This term was used to reflect the normal emotional reaction that people experience. Early cross-sectional MHM research was used to build the dynamic component of the model, which will be detailed later on. This research indicated that differences in mood states between successful and unsuccessful athletes were often more visible during periods of hard training. The dynamic component of the model was initially developed as a result of this research.

Successful athletes also had lower scores on many measures of response distortion and were less likely to be introverts. This was likewise the case for athletes who attained success. A measure of response distortion was revealed to be the best psychological predictor of whether or not an athlete would make it onto the United States Olympic wrestling team. The researchers Nagle et al. demonstrated that the second variable was extremely important when they discovered that the athletes who did not make the squad exhibited features that were suggestive of social desirability. Measurements of response distortion that are included have methodological significance; nonetheless, recent research indicates that social desirability may have health repercussions that have an effect on performance. For example, high levels of social desirability may be associated with "poorer stress coping, greater depression, and greater risk for long term hormonal and immunologic damage," as stated by research conducted by Brody et al., who found a positive link between SDS scores and salivary cortisol levels in young adults.

It is important to note that the mental health profiles of athletes who were unable to achieve their goals rarely differed from the norms that were stated. In light of this, it appears that the lack of success that they experienced was more frequently associated with their average psychological health, rather than an unfavourable profile or psychopathology that has been clinically established. As a consequence of this, there was hardly ever a substantial difference in the mental health of the groups who were successful and those that were unsuccessful, and clinical abnormalities were not observed among the competitors who were unsuccessful. The fact that the psychological tests that were utilised were not designed to diagnose mental illness is yet another significant point to take into consideration. In a manner that was rather unexpected, careful model testing did not uncover any significant differences in psychological factors between those who were successful and those who were unsuccessful. According to the findings of a number of

studies that Morgan and his colleagues carried out, athletes who were judged unsuccessful may be regarded as remarkable, given that they were competitors for Olympic or World teams.

Despite the fact that it was demonstrated that psychological traits may dependably differentiate between successful and unsuccessful athletes to a higher extent than chance alone, the precision that was reached was deemed insufficient for the purpose of selecting athletes for competition. Both the statistical and clinical prediction methodologies, according to Morgan's findings, frequently created errors, such as false negatives, in which individuals are successful even when they do not have positive mental health. Taking into consideration the model's restricted performance, this should not come as a surprise. On the other hand, there have been instances of athletes failing to perform during competitions despite having consistently good mental health (also known as false positive reports). Because the psychological profiles of athletes were neither consistently positive nor consistently negative in a number of instances, it was impossible to use the clinical technique to make predictions when it came to the sportsmen. According to the findings of a study, wrestlers who were selected for the United States Olympic squad had higher anger scores on the Profile of Mood States (POMS) than those who were not selected. This finding points to the possibility that anger could be an asset in the sport of wrestling. Additional POMS research has not been able to discover differences in mood profiles among samples of players from other sports, which is a response to the assertions that the mood state profiles of successful athletes are distinctive to their respective sports.

Athlete Achievement and Introversion/Extroversion

Despite the fact that prior assessments had revealed that high extroversion scores were more significant for athletic achievement, Morgan hypothesised that introversion is more significant for athletic achievement than high extroversion scores. As a result, those who are successful in their endeavours are more likely to have extroverted personalities that are somewhere in the middle. People that are more introverted may have an advantage in some sports due to the perceptual qualities they possess. As an illustration, when it comes to matched exercise workloads, introverts have a tendency to report higher levels of felt exertion in comparison to extroverts. Moreover, research has demonstrated that extroversion is associated with more constructive methods of coping with different types of stress. persons who are more extroverted are more likely to seek out social support and actively strive to reduce the source of their stress when they are confronted with a stressful circumstance. On the other hand, persons who score higher on the neuroticism scale are more likely to resort to avoidance or ignoring strategies when they are in a difficult scenario. certain individuals believe that introverted athletes have a lesser pain tolerance than extrovert athletes do. This is the opinion of certain critics. Surprisingly, however, there is a paucity of research that investigates the perception and tolerance of pain in athletes. Furthermore, more recent attempts have also failed to demonstrate a correlation between the subjective experiences of pain and individual differences in personality.

Recently, there has been significant discussion regarding whether or not the personality trait of introversion versus extroversion is considered to be related to athletic performance. After doing a literature study on sports personalities, Vanden Auweele and his colleagues came to the

conclusion that outstanding athletes do not often demonstrate extroversion that is above the average or over average. Nevertheless, the research included only studies that utilised the 16-Personality Factors Inventory (16-PF) or the Eysenck Personality Inventory (EPI) to assess extroversion; it should be highlighted that these extroversion measures do not have a strong link with one another. In addition, the authors came to the conclusion that the EPQ results should not be included since they believed that it did not have sufficient requirements for American athletes. Extroversion studies based on other scales, such as the Minnesota Multiphasic Personality Inventory, was not included in the study, despite the fact that it did integrate results from translations of the EPI or 16-PF into other languages. In spite of the fact that both the EPI and the 16-PF contain procedures to check for response distortion, it was not made clear whether or not these studies were included in the research. We aggregated the data in order to obtain a single effect size, and we found that there were differences in extroversion scores between the groups of athletes who were successful and those who were not successful. The fact that fifteen percent of the athletes who were included in this meta-analysis engaged in shooting sports lends credence to the assertions that were made by Hardman and Eysenck et al., which said that introversion may be an advantage in some sports.

It is argued that the introversion-extroversion dimension is still a good one to investigate in the realm of sports, taking into consideration the information presented above. It would be fascinating to observe how different types of extroversion, such as social warmth and boldness, interact with other characteristics of personality in order to forecast future athletic success. investigations of personality and sports that deal to the neurobiology of extroversion and its impacts on behaviour may be able to benefit from recently discovered knowledge that can be used to inform these investigations.

Dynamic Psychological Factors in the MHM

According to the findings of Morgan's research on the MHM, the most important factor is not the athlete's baseline qualities but rather the athlete's psychological reaction to training. Because of this, he makes the argument that the model may be improved by include longitudinal assessments of psychological components. To be more specific, training-specific assessments of certain psychological variables (such moods and mood) should be employed at frequent intervals in order to improve the prediction value of mental health status for athletic performance beyond what can be accomplished with trait assessments alone during training. The dynamic component of the MHM was initially the subject of a limited amount of research; however, more recent investigations have demonstrated that it is well-supported. According to the findings of a study conducted by Morgan and colleagues on 500 athletes who competed in endurance sports such as swimming, there was a significant association between the emotional moods of athletes and the amount of physical training they had received. The findings of these research indicate that as training loads are increased, performance levels either remain stable or even decrease, and that mood disturbance levels rise in direct proportion to this trend.

During light training, mood disturbance measures typically reveal scores that are one to two standard deviations lower than the norms that have been published. During the peak of training

load, also known as overtraining, the values of mood disturbance tend to be comparable to or even higher than the norms that have been reported. On the other hand, the positive variable of vigour exhibits a proportional decline as the training volume or intensity increases. The majority of athletes who reduce their training schedules report an improvement in their mood. Furthermore, studies have demonstrated that negative mood characteristics are heightened following the completion of strenuous anaerobic exercise routines. As a result, there is a dose-response association between the modification of training load and the occurrence of mood disturbance. There is evidence to suggest that endocrine and neuromuscular variables, which are two biological indicators that are relevant to training state, are connected with oscillations in mood state that athletes experience.

There are roughly ten percent of athletes who have extreme mood swings and have a negative reaction to training taper programmes, despite the fact that the majority of athletes are able to withstand rigorous overtraining. These individuals are afflicted with staleness syndrome, which is often referred to as overtraining syndrome. This syndrome is responsible for a wide range of physical and mental symptoms, including prolonged poor performance and feelings of depression. Athletes that experience staleness exhibit somewhat greater elevations in each of the POMS mood components, with despair exhibiting the greatest increase among these elevated components. POMS factor variations in vigour and tiredness are the most pronounced in athletes who have overtrained themselves and do not become stale. On the other hand, rises in confusion and despair rarely amount to anything. The degree and pattern of mood changes that are experienced by unhealthy athletes and athletes who overtrain are distinct from one another due to the fact that this is the state of affairs. Attempts have been made to identify the particular characteristics of personality that are responsible for mediating this reaction; nevertheless, there has not yet been a definitive winner.

The implementation of an intervention plan that was based on the findings of monitoring study and made use of the dynamic characteristic of the MHM was done with the intention of reducing the number of instances in which dullness occurred. In order to ensure that elite race canoeists were prepared for the Olympics, Berglund and Safstrom made it a point to have them perform the POMS on a regular basis during the training season. It was established that athletes whose POMS scores were significantly higher than baseline values (that is, significantly greater than fifty percent) had their training loads reduced. It was discovered that athletes who had much lower ratings for mood disturbance in comparison to their counterparts had improved their training. It is recommended that athletes who have "better than average" performance adhere to the recommendations for progressive training that are provided by the MHM. It is reasonable to expect that individuals who are intellectually capable of training should be able to endure more severe training regimens and possibly even benefit from them. In the course of the research, the training loads of more than half of the people who took part in the study were varied at some point. Following the conclusion that the intervention strategy had been successful, the writers came to the conclusion that there were no reports of staleness and that many athletes had earned Olympic medals.

It is suggested by Morgan that the static component of the model may be expanded by integrating the trainee's dynamic emotional response to training in order to provide a more comprehensive illustration of the relationship between psychological elements and performance in sports. This method was utilised by researchers in order to assess the preseason rowing ergometer performance, mood state (POMS), and the personality trait of self-motivation in female athletes who were contending for a position on a college rowing team. In addition, mood status was monitored every other month throughout the course of the season. In this study, a comparison was made between the women who continued their training throughout the season and those who stopped in the middle of the season. Those stickers that were able to advance to the national competition (also known as finalists) and those who were not able to do so (also known as nonfinalists) were also compared. On the rowing ergometer and in terms of measures of intrinsic motivation, the results were comparable for those individuals who did not make the squad, but they were lower for those individuals who qualified. According to the findings obtained from a rowing ergometer, the improvement of the athletes' times was directly proportional to the degree to which they were self-motivated. All of the groups' baseline mood disturbance scores were higher than the published college norm, and there was no significant difference between the groups in terms of their mood disturbance scores. While the mean value of mood disturbance returned to its baseline level for the finalists, the non-finalists were more likely to have elevations in mood disturbance after severe training that continued following a training taper. These findings show that a more comprehensive picture of the relationship between mental health and performance in sports can be generated by integrating static and dynamic psychological evaluations. This picture would include aspects such as the consistency of training and the standing of the team (i.e., nonfinalists and finalists). When conducting research on MHM, it would be beneficial to make an effort to combine the static and dynamic components of the model in a more transparent manner, and to determine whether or not these and other psychological factors exhibit a hierarchical structure.

State Anxiety and Sport Performance

The stresses of competing tend to cause state anxiety levels to skyrocket in the hours or days leading up to a sporting event. This is due of the tension that comes with competing. Athletes display a wide range of individual variances in the strength of their state anxiety reactions and, more importantly, in the manner in which these responses impair their performance. According to research conducted on a variety of sports, thirty to forty-five percent of athletes report doing their best in their sport, despite experiencing significantly elevated levels of state anxiety. In accordance with Hanin's Individual Zones of Optimal Functioning (IZOF) hypothesis, which is founded on these findings, a significant number of athletes are only able to perform at their highest level when they are experiencing tremendous emotional stress as a result of either winning or losing a tournament. According to the IZOF model, there is no group or systematic effect of characteristics such as sport type, experience, or talent on the amount of anxiety that is associated to peak performance. This is in contrast to more standard theoretical explanations, which suggest that there is such an effect.

By using models that are based on individual responses (idiographic responses) rather than group-based theories (nomothetic theories), it is possible to study the effects of temporary changes in mood state due to competition on the performance of mentally healthy athletes. This is according to research that was conducted by Hanin and others. The relevance of this distinction is brought to light by the nomothetic static component of the MHM, which examines the link between group performance and personality traits and measurements of mood that are similar to those of attributes. In addition to nomothetic and idiographic components, the dynamic part of the MHM includes the following: In spite of the fact that there is a significant connection between mood disorders and poor performance following strenuous exercise, the level of tolerance that athletes have for such training varies substantially. The IZOF model, on the other hand, is entirely idiographic; it proposes that there ought to be significant interindividual variations in both the level of anxiety that athletes experience before to competition and the impact that anxiety has on competitive performance.

The IZOF and MHM have, unfortunately, not always been appreciated for their complementary nature to one another. These two approaches, on the other hand, have been portrayed as competing hypotheses on the ways in which an individual's mental state influences their performance in sports. To give one example, Prapavessis and Grove used the POMS to assess the acute mood state (also known as "right now") of pistol shooters soon before several tournaments. This was done in an effort to examine the relative effectiveness of the IZOF and the MHM. The MHM was rejected by the authors due to the fact that they only identified disparities in performance when in the process of testing the IZOF model. However, as was indicated earlier, these models differ in the way that they investigate the impact of different types of stresses on performance (for example, training versus competition), the level of analysis (for example, group versus individual), and the psychological measures that are utilised (traits versus states). Within the context of a more recent investigation, Prapavessis and his colleagues acknowledged these distinctions and arrived at the conclusion that the IZOF model is more suited to investigate the ways in which an individual's disposition influences their performance prior to a competition.

More recently, Hanin broadened the scope of the IZOF model to incorporate idiographic assessments of effect, which covered both positive and negative effects. This allowed the model to encompass more than only anxiety. This way of thinking is in line with the new school of thought that suggests that in order to regulate and cope with emotions, one must have elevated levels of both positive and negative feelings, which are interpreted differently depending on the context. While the conventional wisdom maintains that negative affect should be kept to a minimum, this way of thinking conforms to the new school of thought. There have been some people who have argued that it could be good to conduct research on the secondary emotional responses that viewers have to the length of a variety of sporting events. It will be necessary for future study to determine whether the MHM and IZOF models can be merged into an interactional framework. However, it is evident that utilising both models together can provide insight on the ways in which mental qualities and emotions effect performance on the field.

A Guide to Evaluating Emotional Well-Being

An individual's mood state is the most reliable measure of their emotional well-being, and the iceberg profile is best understood as a visual representation of that health. There is some debate over its usefulness as a therapeutic tool; nevertheless, its potential as an experimental variable is not in question. A more appropriate choice would be to compare the T-scores of the POMS subscales, or, as the developers of the instrument have advised, to use total scores to determine whether or not there is a significant mood disorder. There should be more than only the POMS used to determine the mental health profiles of athletes. By incorporating other measures of personality structure, it is possible to obtain a psychological profile of the athlete that is more thoroughly comprehensive. Because research has indicated that certain athletes may exhibit answers that suggest social desirability, it is also advised that tools to detect response distortion be used on a routine basis. It may be beneficial to investigate other psychological factors associated to mental health in future MHM studies. Some examples of these traits include social support and the ability to cope with stressful situations. When it comes to future research, it is possible that more recent theories of personality, such as the 5-factor model, could also give beneficial results.

It is recommended that baseline evaluations for the static or dynamic MHM be carried out during off-season periods of easy training or rest in order to obtain the most reliable results possible. It has been discovered that a valid substitute for this is to have athletes fill out the POMS based on how they felt during easy training times. This is the case in situations where this is not practical. When doing research on overtraining, it is common practice to compare the current mood state score of an individual athlete to that of other athletes who are currently experiencing training that is comparable to the athlete's own, rather than comparing it to the norms that have been published publicly. Through the utilisation of this method, which has been successfully implemented in the field of overtraining research, it is possible to efficiently monitor athletes who are displaying indications of the staleness syndrome. The fact that general pressures such as health, relationships, and social events can have an effect on mood is supported by a substantial body of evidence; hence, it is essential to take these factors into consideration as well.

The 'right now' variant of the POMS should be utilised in order to evaluate the impacts of short-term training programmes. It is essential to take into account the potential impact that approaching competitions may have on the emotional state of the participants. Researchers have developed POMS athlete standards by utilising the "currently" instructional set; however, they recommend that these standards not be utilised in situations when there is a worry regarding overtraining.

Mental Health and Athletic Injury

While the MHM has not been taken into account in the process of designing research on the psychology of sports injuries, the results that apply to the impact of mental health are consistent with the model. To give one example, May et al. conducted a prospective study of Alpine skiers in the United States and found that feelings of grief and other psychological factors were associated with illnesses and injuries that occurred later in the season. Those athletes who started the season with high levels of depression had a likelihood of being cut from the squad that was

more than twice as high as the average (50 percent versus 21 percent). Skiers who had a high level of well-being had a greater likelihood of being selected for the elite squad, whereas skiers who had a poor level of well-being and high life change ratings had a statistically negative connection (r = 0.25 and 0.29, respectively) with team status. According to the findings, there appears to be a connection between having a healthy mental state and having a high level of physical achievement, which may be defined as either being free from disease or injury or being labelled as elite.

evaluations of the players' social support networks, life events, and psychological coping mechanisms were conducted prior to the beginning of the season in order to determine the association between psychological factors and sports injuries in a group of 451 high school athletes. Rather than merely calculating the combined influence of these variables on a subsequent injury, the prediction performance of two interactional models was compared. This prevented the calculation of the combined impact. According to a conjunctive model, the best prediction should be obtained from a particular combination of moderator variables, with changes from this combination limiting the amount of variance that can be explained. It is expected that a disjunctive model will have sufficient scores of every moderator variable in order to enhance prediction power. One of the most effective explanations for vulnerability to harm was the conjunctive model. The combination of inadequate social support and inadequate coping abilities could be responsible for thirty percent of the variation in the amount of time missed due to injury among athletes who had suffered substantial negative life events. This variation was found among athletes who had undergone significant life events. There was a significant reduction in the amount of variance that could be explained when consideration was given to the influence of these variables individually. A disjunctive model, on the other hand, offered the most compelling explanation for the resilience that is exhibited in the face of harm. There was a correlation between athletes who had high coping abilities or appropriate social support and athletes who were less likely to sustain injuries; however, combining both attributes did not increase resilience.

These findings, together with those of Hanin, could be beneficial to research that is being conducted on the psychological aspects of sports injuries. As far as we currently understand it, negative feelings such as concern and psychological stress enhance the likelihood of damage as a result of increased muscular tension or impaired visual acuity. Nevertheless, it would be obvious that the psychobiological demands of the athletic job would be the determining factor in determining the impact of such alterations. As an example, sport psychologists frequently educate players in various relaxation techniques in order to reduce the risk of experiencing injuries. According to the findings of Mote's research, the contraction of the musculature is critically important for the safety of skiers. Additionally, the research demonstrated that low muscular tension might be detrimental to skiing ability. When going skiing, one must always maintain a high level of vigilance. The impacts of stress-related emotions on areas of physical health, such as immunological function, cognition, and bodily endurance and strength, have been widely documented, and under normal circumstances, there would be a larger likelihood of injury due to these effects. In addition, research has shown that depression makes movement

times longer and hinders fine motor abilities, both of which are important for performance in a range of sports in order to achieve success.

CONCLUSION

According to the MHM, athletes who have average or poor mental health should, in general, perform worse than those who have great mental health. This is the case despite the fact that a number of reviewers have expressed their disagreement with this assertion. None of these assessments took into account the entire body of work that has been done on MHM; rather, they all defined the model in accordance with the iceberg profile and focused solely on mood state. Another feature that Morgan referred to as the "dynamic aspect of the MHM"—that is, the influence that athletic training has on one's mood state—was severely ignored in these examinations, with the exception of one. In contrast, research that explicitly incorporates or controls for the consequences of physical training and athletic competition into its design consistently indicates that desirable emotional health is related with sport performance. This is the case regardless of whether the research is conducted in the United States or in other countries.

There is little evidence to suggest that other psychological evaluation methods may provide a higher level of accuracy, and the MHM's limited accuracy in distinguishing between successful and unsuccessful competitors is incompatible with its use as a tool for selecting athletes for sports teams. One such thing that raises ethical concerns is the use of psychological exams in the selection process for athletes.

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