



Sleep, Anxiety and Coping Experience of Nigeria Elite Football Referees Prior to Physical Fitness Test

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Abstract

This study examined the relationship between sleep, anxiety and coping experience of Nigeria elite football referees prior to physical fitness test. The correlational research design was adopted for the study. The subjects of this study are 40 active, grade one, premier and FIFA badged referees from Nigeria. Data was collected using a questionnaire titled Sleep, Anxiety and Coping Experience prior to Fitness Test Questionnaire (SACEFTQ). The questionnaire was validated by relevant authorities and Cronbach alpha method was used to test reliability of the instrument. Pearson product moment correlation statistical tool was used for data analysis. The finding of this study reveals that there was a significant relationship between sleep, anxiety, and coping experience prior to physical fitness test. Based on the findings, it was recommended among others that elite referees should be adequately sensitized and encouraged to have sufficient sleep, especially as they prepare for fitness test in order to enable them cope better before and during fitness tests. It was further recommended that sports psychologists should be engaged to help elite referees to manage anxiety usually experienced during the period of fitness test in order to enable them cope more effectively with the anxiety associated with fitness tests.

Keywords: sleep, anxiety, coping experience, physical fitness test.

Introduction

Elite referees play a critical role in maintaining the fairness and flow of competitive sports, yet the pressure they experience is often overlooked. Nigerian elite football referees, in particular, face unique challenges, including intense physical and mental demands, socio-cultural expectations, and the public scrutiny that comes with high-profile matches. Before a physical fitness test, which is a prerequisite for continuing in their roles, referees must contend with the psychological burden of proving their competence. The physical fitness test is a high-stakes assessment that measures their ability to keep up with the pace of professional games, directly impacting their career stability. Leading up to this test, referees often report heightened levels of anxiety, disruptions to sleep, and must engage in coping strategies to manage their stress levels. Sleep is a critical component of

athletic performance and cognitive function. For referees, sleep is essential for mental clarity, decision-making, reaction time, and emotional regulation, all of which are crucial on the field (Samuels, 2008; Fullagar et al., 2015). However, anxiety about the upcoming fitness test may lead to sleep disturbances such as insomnia, reduced sleep duration, or poor sleep quality, which can negatively impact their physical and psychological preparedness (Halsen, 2014; Ford et al., 2017).

Research on the sleep, anxiety, and coping experiences of elite football referees in Nigeria is limited but growing. A study by Ogabor et al. (2023) highlighted the significant impact of stress and frustration tolerance on the performance of elite referees. The study found that higher levels of perceived stress were associated with poorer performance, while better frustration tolerance correlated with improved performance. These findings underscore the importance of addressing psychological factors to enhance referees' performance. Another study emphasised the need for a comprehensive mental health research agenda for football referees, noting the lack of attention given to their mental health compared to players often make them underperform during the course of their officiating matches, (Gorczynski & Webb, 2021). In high-stress situations, such as prior to an important test or match, elite athletes and referees often experience "pre-competition insomnia," a form of sleep disorder characterised by difficulty falling or staying asleep (Juliff, Halsen, & Peiffer, 2015). Research shows that inadequate sleep impairs both endurance and decision-making (Walker, 2017), which are essential skills for referees who must maintain both physical stamina and rapid, fair judgment on the field.

A study conducted by Fullagar et al. (2015) on sleep and recovery in elite athletes demonstrated that poor sleep quality correlated with reduced performance outcomes, increased injury risk, and heightened levels of perceived exertion during athletic tasks. Given that referees operate in a high-demand environment similar to athletes, these findings can be applied to understand the importance of sleep in their preparation for fitness tests.

Anxiety is a common experience among athletes and officials before significant events. It is a natural human response that affects both the mind and body (Zhang et al., 2024). Anxiety is commonly experienced by elite referees due to the pressure of meeting physical and performance

standards. The pressure to perform well in fitness tests can exacerbate anxiety levels. Excessive anxiety triggers the release of stress hormones such as cortisol, which can negatively impact physical performance by disrupting cardiovascular function and reducing energy efficiency (McEwen, 1998). Anxiety can stem from various sources, including fear of failure, concerns about physical readiness, and the high stakes associated with maintaining their officiating status (Gorczyński & Webb, 2021). Performance anxiety can be broken down into two categories: Trait Anxiety (a general tendency to experience anxiety) and State Anxiety (situational anxiety associated with specific events, such as the fitness test).

In anticipation of the fitness test, Nigerian referees may experience state anxiety due to concerns about their performance and career implications. Elevated anxiety levels can negatively impact both mental and physical health, potentially leading to poorer performance during the tests (Khan et al., 2017). According to Martens et al. (1990), anxiety in competitive sports settings can be both facilitative and debilitating; a moderate level may improve focus, while excessive anxiety can hinder concentration, reaction time, and overall performance. Studies have shown that anxiety can significantly impact sleep quality, leading to issues such as insomnia, fragmented sleep, and reduced sleep duration (Ogabor et al. 2023; Kahn et al., 2013). Pourfaraj et al. (2019) found that Iranian referees displayed heightened anxiety before major events, which correlated with reduced performance. This finding underscores the importance of psychological support for referees to manage pre-competition anxiety.

Given the high levels of anxiety and potential for sleep disturbances, coping strategies become essential for Nigerian elite referees. Coping with the stress is a significant factor that can influence referees' performance both positively and negatively when officiating. Coping refers to the dynamic cognitive and behavioural efforts to handle specific internal or external demands perceived as challenging or beyond one's resources (Lazarus & Folkman, 1984). It plays a crucial role in regulating emotions triggered by stressors (Pons, Viladrich, Ramis & Polman, 2018).

Those with more experience tend to employ effective strategies, such as mindful breathing, positive self-talk, and seeking support from peers or family. These coping mechanisms help to

reduce anxiety and improve focus, enabling referees to perform better under pressure. In contrast, younger or less experienced referees may be more vulnerable to stress and burnout, highlighting the need for targeted interventions that promote resilience, (Ogabor et al., 2023).

Coping strategies can be categorized into two primary types: problem-focused coping and emotion-focused coping (Lazarus & Folkman, 1984). Problem-focused coping involves strategies aimed at directly tackling the source of stress. For referees, this might include rigorous physical training, reviewing fitness routines, or studying strategies to enhance their performance. Emotion-focused coping, on the other hand, involves managing the emotional response to stress, such as through relaxation techniques, mindfulness, or seeking social support. Effective coping strategies are associated with reduced levels of anxiety and better mental resilience (Nicholls & Polman, 2007).

The choice of coping strategy is crucial, as maladaptive coping, such as avoidance or denial, can lead to poorer outcomes and increased stress (Anshel, 2001). The socio-cultural context in Nigeria may influence the coping mechanism that referees use. For instance, collectivist cultures may favor social coping, where individuals rely on community support for stress relief (Triandis, 1995). However, stigma surrounding mental health issues in Nigeria may limit referees' willingness to seek psychological help, increasing the likelihood of maladaptive coping mechanisms such as avoidance.

Ultimately, the relationship between sleep, anxiety, and coping mechanisms is central to referees' ability to perform at their best. Addressing these factors, particularly in the Nigerian context, is critical for enhancing both their well-being and performance in high-pressure situations like physical fitness tests. Understanding these dynamics can inform interventions aimed at helping referees maintain their physical and psychological health, ensuring they are ready for the challenges of their role and contributing to the overall fairness and quality of the game. This study aims to explore the relationships between sleep quality, anxiety levels, and coping experiences among Nigerian elite football referees in the days leading up to their physical fitness tests, providing insights into how these factors impact their readiness and overall performance.

Purpose of the study

The main purpose of the study was to:

1. investigate the relationship between sleep quality and coping experiences among Nigerian elite football referees in the days leading up to their physical fitness tests in Cross River State.
2. investigate the relationship between anxiety levels and coping experiences among Nigerian elite football referees in the days leading up to their physical fitness tests in Cross River State.

Research hypothesis

The following hypothesis were posed to guide the study:

- i. There is no significant relationship between sleep quality and coping experiences among Nigerian elite football referees in the days leading up to their physical fitness tests.
- ii. Anxiety does not significantly relate with coping experience of elite football referees before fitness.

Methodology

Correlational research design was considered most appropriate for the study. This design allows the researcher to assess the relationship that exists between the independent and dependent variables in the study. This study investigated experience of Nigeria elite football referees prior to physical fitness test in Cross River State. Therefore, the purpose of this study can be achieved using the correlational research design. The population of this study comprised all elite referees that are registered with the Nigeria Referees Association. The records from the secretariat of the Nigeria Referees Association revealed that there are one hundred and ninety three (193) registered elite referees in the country. They comprise both males and females respectively.

The sample for the study consisted of forty grade A elite and FIFA referees that were randomly selected from the list of registered referees with the Nigeria Referees Association. Simple random sampling technique was adopted to select the respondents used for the study. A twenty item, four point rating scale instrument titled "Sleep Anxiety and Coping Questionnaire" was used for

data collection. The instrument was duly vetted by relevant authorities before it was administered. Cronbach alpha method was utilised to establish the reliability of the research instrument. Data obtained for the study was coded by assigning numerical values to each response in the research instrument.

Results and discussion

Hypothesis one

There is no significant relationship between sleep and coping experience of elite referees before fitness test. The independent variable in this hypothesis is sleep while the dependent variable is coping experience of elite referees before fitness test. Pearson product moment correlation statistical tool was employed for data analysis. The result of this analysis is presented in Table 1.

Table 1: Pearson product moment correlation analysis of the relationship between sleep and coping experience of elite football referees before fitness test in Cross River State (N= 40)

Variables	\bar{X}	SD	Cal.r	P.value
Sleep	13.1037	.70472		
			-.516	.000
Coping experience of elite football referees before fitness test	25.4667	1.73549		

*Significant at 0.05; df = 38

The result of analysis of data as presented on Table 1 shows that the calculated r.value of -.516 is higher than the p-value of 0.000 at 0.05 level of significance with 38 degree of freedom. This indicates that the null hypothesis is rejected. As a result, there is a significant relationship between sleep and coping experience of elite football referees before fitness test in Cross River State.

Hypothesis two

Anxiety does not significantly relate with coping experience of elite football referees before fitness. The independent variable in this hypothesis is anxiety while the dependent variable is

coping experience of elite football referees before fitness. Pearson product moment correlation statistic was employed for data analysis. The result obtained from analysis of data and testing of this hypothesis is presented in Table 2.

Table 2: Pearson product moment correlation analysis of the relationship between anxiety and coping experience of elite football referees before fitness test in Cross River State (N = 40)

Variables	\bar{X}	SD	Cal.r	P.value
Anxiety	13.1111	1.04857		
			-.303	.000
Coping experience of elite football referees before fitness test	25.4667	1.73549		

*Significant at 0.05; df = 38

The result of analysis of data as presented in Table 2 shows that the calculated r.value of -.303 is higher than the p-value of 0.000 at 0.05 level of significance with 38 degree of freedom. This indicates that the null hypothesis is rejected. As a result, there is a significant relationship between anxiety and coping experience of elite football referees before fitness test in Cross River State.

Discussion of findings

The analysis of data and testing of the first hypothesis in the study revealed that the null hypothesis was rejected. This indicates a significant relationship between sleep and the coping experiences of elite football referees before their fitness tests in Cross River State. The importance of this finding lies in the critical role sleep plays in human well-being. Sleep is essential for the coping experiences of elite football referees before fitness tests because it is during sleep that the body repairs and rebuilds tissues stressed during daily activities. Adequate sleep helps regulate hormones like cortisol, which influence muscle growth and recovery. Without sufficient sleep, elite referees often experience decreased athletic performance, a higher risk of injury, and slower muscle recovery. Therefore, ensuring adequate sleep is crucial for optimising fitness gains.

The findings of this study align with those of Kriswanto et al. (2019), who reported that sleep is a period of rest and rejuvenation. Likewise, Walker (2017) revealed that inadequate sleep impairs both endurance and decision-making. Sleep is a fundamental physiological need, essential for human survival, and its quality significantly impacts psychological and physical health. Poor sleep quality can increase daily stress and reduce productivity (Kriswanto et al., 2019). Fullagar et al. (2015) concluded that poor sleep quality correlated with reduced performance outcomes, increased injury risk, and heightened levels of perceived exertion during athletic tasks. Environmental factors also play a crucial role in enhancing sleep quality; a clean environment, cool temperatures, a calm atmosphere, and adequate lighting promote good sleep, while a dirty environment, hot temperatures, noisy surroundings, and very bright lighting can deteriorate sleep quality. Additionally, anxiety and depression can lead to sleep disorders.

The finding of this study also supported that of Ford et al., 2017) who asserted that other factors influencing sleep may include bedtime behaviours like exposure to bright lights, working on bed, eating heavy meals at night, drinking too much water prior to bed time, excessive alcohol intake among other factors. When athletes face hitches in their environments (training and/or competing close to sleep time and traveling period), endogenous circadian rhythms and normal sleep-wake cycles can become desynchronised. These disturbances in sleeping patterns can cause an increase in homeostatic pressure and influence emotional regulation, basal temperature, and circulating levels of melatonin, leading to a delay in sleep onset (Ford et al., 2017). Having a planned event ahead can affect sleep. Physical fitness test is an important event for a referee. Quality of sleep might be lowered if the referee spends time worrying about the outcome of the test. Signs of sleep deprivation may include dark circle around the eyes, irritability, inability to concentrate, fatigue and quick exhaustion.

The finding obtained from analysis of data and testing of hypothesis two in the study revealed that the null hypothesis was rejected. This implied that there was a significant relationship between anxiety and coping experience of elite football referees before fitness test in Cross River State. The finding of this study could be attributed to the fact that anxiety is common when one is

faced with any uncertainty. Fitness test is a crucial activity in the career of an elite referee and is often associated with fear of failure. The desire not to fail often put referees under pressure that results in anxiety before the fitness test comes up. No matter how prepared a referee is before the fitness test, there is a natural element of anxiety in most referees. This concern over the potential outcome of the fitness test result usually creates some level of fear and possible state of anxiety. This state of anxiety also relates with the coping experience of elite football referees before fitness test.

The finding of this study is in agreement with that of Correia and Rosado, (2019) who reported that most athletes find it difficult to cope with the mental and physical stress associated with fitness test. When subjected to different situations, age, gender and experience are factors that influence sources of stress encountered by referee. Similarly, these factors influence the choice of coping strategies such referees adopt to combat the stress (Gorczyński & Webb, 2021). Older referees tend to cope better than younger referees. Referees who are more experienced cope better than the newbies. Ogabor et al. (2023) established that less experienced referees are usually victims of burnout which is occasioned by failure to cope with prolonged stress. Some of the coping strategies include mindful breathing, self- confidence, self- talk, discussing with peers, positive thinking among others. Some referees who are reserved tend to be withdrawn and engage in self-talk to cope with the stress of fitness test. Some talk it out with their family and peers who reassure them. Others tune their minds to reflect on the positive side of the fitness test knowing that scaling through the fitness test further advances their career in refereeing.

The finding of this study also supported that of Pourfaraj et al. (2019) who revealed that anxiety is a typical human response that affects both the body and the intellect. It is an alert system that is triggered whenever someone feels threatened or in danger. A person experiences physical symptoms of anxiety when their body and mind respond to danger or threat. Anxiety is viewed negatively in sports since it is a negative emotion. Sports psychologists have long believed that high levels of anxiety during competition are harmful, worsening performance and even leading to dropout (Khan et al. 2017). Prior to fitness test, anxiety is about passing the test or not. This can be

manifested in the referee's inability to concentrate, restlessness, inability to sleep, increased heart rate, sweating, anger, fear and palpitations among other behaviors.

Referees who are confident that they will scale through the test are usually less anxious than others. Anxiety may influence the outcome of the physical test. In other words, a referee who is fit, may perform poorly in the test because he is overly anxious. On the other hand, a determined, confident and physically fit referee will excel easily. Older referees appear less anxious than newbies probably because they have more experience.

Conclusion

The study focused on understanding the relationship between sleep patterns, anxiety levels, and coping experiences among elite football referees in Cross River State, specifically in the period leading up to their fitness tests. Given the physical and mental demands placed on referees, particularly at elite levels, factors such as sleep quality and anxiety can play crucial roles in how they prepare for and cope with stressful situations, such as fitness evaluations. The findings revealed a significant relationship between sleep, anxiety, and coping experience, suggesting that referees who experienced better sleep quality and lower anxiety levels tended to have more effective coping mechanisms. These results indicate that both sleep and anxiety are critical in shaping how referees handle stress and maintain performance levels before crucial assessments like fitness tests. In conclusion, the study suggests that strategies aimed at improving sleep and managing anxiety could positively impact on the coping abilities of elite referees. By addressing these factors, it may be possible to enhance referees' readiness and resilience in high-pressure contexts, which is essential for their role and overall performance.

Recommendations

The researchers made the following recommendations based on the findings that were obtained from analysis of data and testing of hypotheses in the study;

1. Elite referees should be adequately sensitized and encouraged to have sufficient sleep especially as they prepare for fitness test in order to enable them cope better before and during fitness tests.

2. Sports psychologists should be engaged to help elite referees to manage anxiety usually experienced during the period of fitness test in order to enable them cope more effectively with the anxiety associated with fitness tests.

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