
Examining the association between motivational climate and anxiety levels pre-competition handball athletes: Gender insights

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Abstract

Coaches significantly influence athletes' needs and psychological performance by influencing the motivational climate in sports. The study aimed to analyze the relationship between the motivational climate of coaches and the anxiety of handball players before competitions, with a special emphasis on gender disparities in sports. The population in this study is the West Java National Sports Week Handball team, which totals 30 athletes. The sample in this study uses the total sampling method, so the sample in this study is 30. The data collection technique in this study uses the Perceived Motivational Climate in Sport Questionnaire-2 and the Competitive Sport Anxiety Inventory-2R questionnaire. The data analysis technique in this study uses a simple correlation test analysis using the product moment correlation formula and a quantitative descriptive methodology with the help of SPSS. These findings show that the level of anxiety and motivational atmosphere of coaches is significantly positively correlated in both male athletes (p-value 0.008) and female athletes (p-value 0.000). Based on descriptive statistical analysis, male athletes had a greater average level of anxiety (45.7550) than female athletes (40.5709). In contrast, female athletes were more influenced by the motivational climate (average score of 89.9769) than male athletes (84.3422). Based on the study's findings, gender has an impact on anxiety ahead of the competition, and male and female athletes react differently to pre-competition stress.

Keywords: Gender insights, handball, motivational climate, pra-competitive anxiety.

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INTRODUCTION

Sports engagement is seen as a crucial step in the socialization process (Kane, Mishra, & Dutta, 2016). Every athlete must have good

moral and psychological qualities to succeed in their particular sport. Evaluating an athlete's total quality involves considering psychological variables in addition to their physical and technical attributes. Important psychological components of athletics include a persistent mindset, a fear of failure, consistently displaying positive body language, and using pressure as motivation to improve performance (Ghildiyal, 2015). Sports psychologists and researchers have looked into motivation more than any other psychological topic (Clancy, Herring, & Campbell, 2017; Kavussanu & Stanger, 2017). The coach's position is one of the most important aspects of sports. Consequently, the coach's motivational climate becomes a social component that can affect how well athletes perform and how their psychological needs are met (Kipp & Weiss, 2015).

Everyone must have experienced anxiety or even fear of various situations, such as fear of being scolded, fear of failure, and fear of worry before competing. Anxiety in this match will cause excessive emotional pressure, which can certainly interfere with the implementation of the game and affect a person's appearance or achievements. Anxiety is a feeling that can cause emotional pressure experienced by anyone, when and anywhere, when facing an important situation, such as facing a match. Feelings of anxiety arise in athletes due to intrinsic and extrinsic factors, which can affect the performance of athletes when competing. Assumptions such as imagining a stronger opponent, a physical condition that is not good enough, a very big event, or everyone has excessive expectations can lead to excessive anxiety. Athletes are also motivated by opportunities to showcase their skills and receive recognition from teammates and coaches (Paramitha, Komarudin, Fitri, & Ramadhan, 2022). Fear of failing can be triggered by the motivational climate that develops during the socialization process in adolescence (Gómez-López, Borrego, da Silva, Granero-Gallegos, & González-Hernández, 2020). Most of the players exhibit high levels of anxiety in their psychological state, as seen by their frequent blunders, erratic confidence, frequent cold sweats, and overwhelming fear (Sartono, Suryaman, Hadiana, & Ramadan, 2020).

The coach's role in sports is crucial since their activities significantly impact creating the ideal environment for motivation ([Klose, Handschuh, Steger, & Artelt, 2024](#)). Coaches must meet the necessary capabilities to comprehend each student-athletes unique abilities and qualities ([Sinulingga & Pertiwi, 2019](#)). Athletes' views of competitiveness and social interactions are influenced by their coach's attitudes, which affects their motivation. Athletes' demands are sometimes impacted by their intrinsic motivation, which is correlated with the coach's perceived personality type ([Martin, Stenling, & Hargreaves, 2024](#)). Emotionally and motivational factors are crucial to the psychology of sports, and there is a clear correlation between personality characteristics such as emotional intelligence and anxiety along with motivational processes ([Castro-Sánchez, Zurita-Ortega, Chacón-Cuberos, & Lozano-Sánchez, 2019](#); [Sheehan, Herring, & Campbell, 2018](#)).

In every level of competition, anxiety is acknowledged as a significant obstacle, and players' skill to handle pressure conditions directly impacts their performance ([Martínez-Gallego, Villafaina, Crespo, & Fuentes-García, 2022](#)). In contemporary sports psychology, anxiousness before a competition is one of the most important problems. It has long been known that psychological elements, particularly anxiety, are important in competitive sports and competition; athletes report feeling afraid before to, during, and following games ([Munir, Nasrulloh, Nyoman, Citra, & Kerih, 2023](#)). The team sport of handball is known for its high-intensity play in both offense and defense ([Setiawan et al., 2020](#)). Anxiety is regarded as common and perhaps essential for achieving peak performance ([Niki, 2024](#)). On the other hand, excessive worry can have detrimental effects, such as a loss in performance, a lack of enjoyment, and a propensity to stop participating in sports ([Klose et al., 2024](#)). Their coaches greatly influence the nature of athletes' sports experiences and their overall quality. The consequences of sports involvement can significantly impact their focus on goals, attitudes, values conveyed, and

interactions with athletes (Albert-Lyons, Capan, Ng, & Nautiyal, 2024). According to research, an ego-focused environment tends to make athletes feel more anxious and less confident, whereas a task-oriented one makes them feel more confident and less worried about competing (Agans, Su, & Ettekal, 2018; Avcı, Çepikkurt, & Kale, 2018).

Athletes might be helped by a variety of psychosocial strategies to assist them in managing stressful situations that cause anxiety in general. The most effective psychosocial approaches include self-talk, goal-setting, relaxation techniques, and social support (Ford, Ildefonso, Jones, & Arvinen-Barrow, 2017). Therefore, an intentionally chosen motivational climate variable is included in this study. These approaches can aim to provide athletes the capacity to control their unreasonable or unrealistic cognitive assessments, reduce emotional reactions, and avoid harmful behaviors and physiological symptoms. Gender differences in goal features have been found in several studies utilizing perspectives from the accomplishment goal theory (Carvalho & Conde, 2024). Based on observations showing men focus more on winning and demonstrating their skills to others in successful situations than women, there are gender differences in goal orientation (Menon, 2024). According to the study, men are more likely to perceive an ego-oriented motivational atmosphere, whereas women are more likely to perceive a task-oriented motivating climate (Thompson-Lee, Klassen, Wang, & Snell, 2024) on previous research, did not look at what influences the ideal amount of activation or anxiety. To address this, this study will investigate, taking gender differences into account, the relationship between the motivating climate that coaches establish and the anxiety levels that handball athletes experience before competition. The study aims to highlight the significance of comprehending how gender and coach-athlete interaction patterns might affect athletes' anxiety levels prior to contests and how this can be implemented in coaching and athlete training scenarios. This is aligned with research (Martínez-Gallego et al., 2022).

METHOD

Research Design

This study is a type of correlation research with a quantitative approach to collect data that compares the motivational climate created by coaches with anxiety levels among athletes of different genders. The population of this study consists of athletes from the West Java PON handball team, with a total sample of 30 athletes. They consist of a range of ages between 17 and 27 years and have a minimum of 3 years of experience competing at the competitive level. The sample selection used the Total Sampling technique, including the entire population based on gender. The team authorities gave their prior authorization before the questionnaires were distributed online using Google Forms.

Data collection employed the Perceived Motivational Climate in Sport Questionnaire-2 (PMCSQ-2) (Litalien, Tóth-Király, Guay, & Morin, 2024). The PMCSQ-2 tool comprises 33 items evaluated using a Likert scale that ranges from Strongly Disagree (1) to Strongly Agree (5). It is divided into two main categories: Task-Oriented Climate (including Cooperative Learning, Effort/Improvement, and Important Role) and Ego-Oriented Climate (involving Punishment for Mistakes, Unequal Recognition, and Intra-Team Rivalry). In this study, reliability analysis (Cronbach's alpha) yielded satisfactory results, particularly with a score of 0.87 for the Task Involving climate subscale and 0.89 for the Ego Involving climate subscale.

The Competitive Sport Anxiety Inventory-2R (CSAI-2R) (Putra & Guntoro, 2022; Trpkovici, Pálvölgyi, Makai, Prémusz, & Ács, 2023). The CSAI-2R assesses anxiety across three dimensions with a total of 17 items: somatic anxiety, cognitive anxiety, and self-confidence. Responses are recorded on a Likert scale ranging from 1 (almost never) to 5 (almost always). This study's reliability analysis (Cronbach's alpha) indicated satisfactory scores, specifically with a reliability coefficient of 0.89 for the

self-confidence subscale, 0.84 for somatic anxiety, and 0.73 for cognitive anxiety. Correlation tests were employed in data analysis to assess the association between male and female athletes' degrees of pre-competitive anxiety and the motivational atmosphere of their coach. The pre-competitive anxiety levels and motivational climates of male and female athletes were compared using descriptive statistics.

RESULT

Table 1. Descriptive statistics

	N	Mean
Male motivational climate	15	84,3422
Male anxiety	15	45,7550
Female motivational climate	15	89,9769
Female anxiety	15	40,5709

Based on the table above, descriptive statistics show the average scores of the motivational climate and pre-competitive anxiety levels for both male and female athletes. Male athletes have an average motivational climate score of 84.3422 and an average pre-competitive anxiety score of 45.7550. Female athletes have an average motivational climate score of 89.9769 and an average pre-competitive anxiety score of 40.5709. So, based on these results, the level of motivation is more significant for female athletes, and the level of anxiety is more significant for male athletes.

Table 2. Results of Correlation Test of Motivational Climate with Men's Anxiety

		Motivational Climate	Anxiety
Motivational Climate	Pearson correlation	1	.659
	Sig. (2-tailed)		0.008
	N	15	15
Anxiety	Pearson correlation	.659	1
	Sig. (2-tailed)	0.008	
	N	15	15

Based on the above table, the correlation test results with the Pearson Correlation value 0.659 show a strong positive relationship between the motivational climate and the level of anxiety in men. P value (sig. (2-tailed)) is 0.008 <0.05. So, from the above results, it can be

concluded that there is a correlation between motivation and anxiety before competing against male athletes.

Table 3. Results of Correlation Test of Motivational Climate with Women's Anxiety

		Motivational Climate	Anxiety
Motivational Climate	Pearson correlation	1	.792
	Sig. (2-tailed)		0.000
	N	15	15
Anxiety	Pearson correlation	.792	1
	Sig. (2-tailed)	0.000	
	N	15	15

Based on the above table, the correlation test results with the Pearson Correlation value of 0.792 show a strong positive relationship between the motivational climate and the level of anxiety in women. P value (sig. (2-tailed)) is 0.000 <0.05.

DISCUSSION

Based on the results of the above study, it can be concluded that the motivational climate and the level of anxiety before competing are very influential on male and female athletes. At present, motivation is the main topic of study for both sports psychology and sports performance researchers (Castro-Sánchez, Zurita-Ortega, Ubago-Jiménez, et al., 2019). feedback, rewards, and the coach's ability to inspire players on an individual and team level are all factors that impact the motivational climate. In sports, a coach's motivating climate plays a critical role in influencing athletes' mental preparedness, particularly when it comes to pre-competition preparation (Carvache-Franco, Hassan, Orden-Mejía, Carvache-Franco, & Carvache-Franco, 2024). Pre-competition anxiety in athletes is the degree of psychological pressure based on performance anxiety, insecurities, or fear of failing that an athlete has prior to a competition (Zabidi et al., 2022). Variations in expectations and social support perceptions are among the factors that impact gender anxiety (Lestari et al., 2021). Anxiety in athletes has a variety of purposes at its best, it can increase motivation to train harder and attention to detail, but at its worst, it can impair performance and attention (Widhi Harita et al.,

2022). Therefore, by understanding and implementing a positive motivational climate, coaches can contribute to athletes creating a supportive environment that will influence their mental training for competition. The multidimensional model of anxiety recognizes the three main elements of worry in a competitive situation: cognitive anxiety, somatic anxiety, and self-confidence. The competitive anxiety they experience affects the emotional orientation of their overall psychological condition (Munir et al., 2023). Using a correlation test between motivational climate and anxiety in males shows that the Pearson correlation value indicates a strong positive relationship between Motivational Climate and Anxiety Levels in males. The motivational climate created by the coach in the sports environment is positively related to the anxiety levels in male athletes, and this relationship is statistically significant. In other words, changes in the motivational climate will impact the level of anxiety experienced by male athletes.

On the other hand, men typically exhibit greater self-confidence. Men are more confident in their talents than women because they are much more resistant to other influences (Kavussanu & Roberts, 2016). The anxiety level of handball athletes can be affected by several factors. One of the factors that has a high score in the level of anxiety on the question item is the place of the race, the coach, and the family. This factor can interfere with the athlete's psychological condition, so athletes do not feel good on the field. Athletes who cannot control their anxiety during the race will always feel difficulty in various situations faced when racing, even though the conditions in the race can actually be passed, and it is not as difficult as the athlete imagines what kind of difficulties in his mind.

The coach's motivating climate significantly impacts athletes' perceptions of the team's objectives, standards, and values (Martin et al., 2024). In cases where an athlete's performance gets evaluated or criticized, as it is during a match or competition, they feel intimidated. Athletes' anxiety levels rise in certain situations, resulting in emotions like

doubt about themselves or failure-related madness (Carvalho & Conde, 2024). In the correlation test between motivational climate and anxiety in females, Table 3 shows a strong positive correlation between Motivational Climate and Anxiety Levels in females. The motivational climate created by the coach in the sports environment is positively related to anxiety levels in female athletes, and this relationship is statistically significant. In other words, changes in the motivational climate will significantly impact the anxiety levels experienced by female athletes. This indicates that females are more responsive to the motivational climate than males. An environment that is overly outcome- or competitively oriented can reduce female athletes' innate drive to get involved in sports.

On the other hand, female athletes who have self-confidence in their skills are more likely to experience an internal drive to be competitive. It is critical to highlight individual skills and self-assurance while easing the pressure to be competitive (Kavussanu & Roberts, 2016). The effect of the motivational environment can be used to forecast the anxiety levels of female athletes. Female athletes struggle to regulate their emotions and mental state before the matches. As a result, coaches should think about creating a motivating environment that will help them minimize their anxiety (Reigal, Vázquez-Diz, Morillo-Baro, Hernández-Mendo, & Morales-Sánchez, 2020). To foster a more motivational climate in the coaching environment, coaches might employ techniques including offering positive suggestions, offering emotional support, recognizing athletes' achievements, and establishing attainable yet explicit goals (Thompson-Lee et al., 2024).

To perform admirably, an athlete needs to be mentally prepared to be more responsible, organized, and structured (Aliyyah, Wicaksono, Saniatuzzulfa, & Mukholid, 2020). Athletes' anxiety levels before competition are greatly influenced by the motivational environment that coaches encourage. While an ego-oriented climate can lead to increased pressure and anxiety, a task-oriented one typically encourages support

and lowers anxiety. Therefore, in order to assist players in overcoming fear and achieving peak performance, coaches must create a pleasant and encouraging environment. Gender disparities can impact athletes' pre-competition anxiety, leading to variations in their feelings and reactions to pressure before a competition. Some sports psychology theories shed light on how an athlete's gender may influence their anxiety levels. Studies highlight abnormalities in anxiety behaviors between male and female athletes, potentially attributed to elements including gender indoctrination, anticipated social roles, and variations in hormones. There are differences between males and females. These differences show that the impact of the motivational climate on females is higher compared to males, while male athletes exhibit higher anxiety levels. Coaches must, therefore, develop strategies that will help players manage their anxiety suitably. Numerous strategies, such as cognitive exercises like cognitive restructuring, relaxation techniques, and the development of helpful coping mechanisms, can help athletes improve their mental health and performance (Carvache-Franco et al., 2024). Through the implementation of effective techniques and recognition of the differences in anxiety experiences between genders, coaches may provide a supportive environment for all athletes, regardless of gender.

Among the study's drawbacks is its tiny sample size of only thirty athletes, which might not be adequate to reflect the general population adequately. The study only included PON Handball players from West Java, so players from other areas or sports disciplines may be unable to use the findings. Furthermore, the study concentrates on the motivational climate and anxiety before competitions; nevertheless, many other elements, like physical condition, prior experience, and social support, might also impact anxiety and athletic performance and were not considered in this study. These limitations suggest that to improve the validity and reliability of the findings, more research is required using more significant and diversified sample sizes and a more comprehensive range of data-gathering techniques. This study only measured the general

relationship between the coach's motivational climate and the athlete's anxiety levels. Future research should specifically investigate whether a task-oriented or ego-oriented motivational climate is more effective in reducing athletes' anxiety levels. To provide a more complete picture, future research should take into account additional elements that may influence anxiety and performance in athletes.

CONCLUSION

The morals and psychology of athletes are crucial to their success in sports. Psychological factors such as motivation, anxiety, and emotional intelligence influence athlete performance. Coaches' motivation largely shapes the motivational climate, which affects the athlete's anxiety and performance. An ego-oriented motivational climate tends to create stress and anxiety, whereas a task-oriented motivational environment tends to help and reduce anxiety before a competition. Coaches have an important role to play in helping athletes overcome anxiety and reach the top by creating an environment that encourages and motivates them. One of the influences of gender on pre-competition anxiety levels is the way male and female athletes react to pre-competition pressure.

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