

Comparison of Motivational Climate Between Male and Female Athletes in Team and Individual Sports

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Abstract. This study aims to compare perceptions of motivational and emotional regulation as forms of self-regulation between male and female athletes and between team and individual sport athletes. The research design uses a comparative quantitative approach involving 115 active athletes from various sports. Measurements were conducted using the PMCSQ-2 and IERQS instruments, both of which showed very high reliability, with a Cronbach's Alpha value of 0.932. Data analysis included Kolmogorov-Smirnov normality test and independent sample t-test to identify differences between groups. The result showed no significant differences between male and female athletes on the variables of motivational climate ($M = 124.35$ vs. 121.98 ; $p = 0.507$), ego-involving climate ($p = 0.202$), task-involving climate ($p = 0.6888$), and emotion regulation ($p = 0.778$). the same pattern was seen in comparison between team and individual athletes, where no significant differences were found in motivational climate ($p = 0.747$), ego climate ($p = 0.223$), task climate ($p = 0.326$), or emotion regulation strategies including reappraisal ($p = 0.238$) and suppression ($p = 0.950$). these findings indicate that gender and sport type different do not affect athletes' perceptions of motivational climate or emotional regulation abilities, suggesting that their psychological experiences are more included by uniform coaching patterns, coaching styles, and social environments. The practical implications of this study confirm strategies can be designed universally and inclusively for all athletes, regardless of gender or sport type to research should consider other contextual variables and apply a longitudinal design to obtain a more comprehensive picture of the psychological dynamites of athletes over time.

Keywords: motivational climate; gender differences; team sports and individual sports; emotion regulation



INTRODUCTION

Motivation is the main foundation in shaping the character and performance of an athlete in an increasingly competitive world of sport (Birr et al., 2024). In various sports, both individual and team, motivation plays a central role in driving training enthusiasm, maintaining consistency, and increasing focus when facing competitive challenge (Yukhymenko-Lescroart, 2021). Athletes with high levels of motivation tend to be better able to set goals, overcome failure, and persevere in long-term training processes (Antonio, 2023). In the context of modern sports, the role of motivation has become increasingly important given the increasing demands for performance, public expectations, and increasingly fierce competition among athletes (Malchrowicz-Moško et al., 2020). Therefore, studies on athlete motivation are now directed towards environmental aspects, including how interactions with coaches, teammates, and the coaching system affect and athletes' motivational perceptions and orientation (McCann et al., 2022).

One important concept that has emerged from the development of this study is motivational climate, which is considered one of the important determinants in shaping the overall motivational character of athletes (Rodrigues et al., 2024). Understanding this motivational climate becomes increasingly relevant when we try to understand the dynamics of motivation in different sports contexts, both individually and in teams (Rismayanti et al., 2023). Athlete motivation is greatly influenced by the motivational climate formed through interactions with coaches, teammates, and the training environment, which can show different patterns between male and female athletes as well as between team and individual sports. Research has studied this phenomenon in depth over the past five years, making the comparison of motivational climate an important step in understanding variations in athletes' motivational perceptions based on gender and type of sport.

The motivational climate in sport is a representation of the psychosocial conditions that are formed in the training and competition environment, which indirectly or directly shape the way an athlete thinks, feels, and acts (Thompson et al., 2022). This concept first developed from goal orientation theory, which explains that individuals view success in two main orientations, namely mastery orientation and performance orientation (Dagsdóttir et al., 2023). In a mastery climate, athletes place more emphasis on self-improvement, hard work, and learning as indicators of success (Pettersen et al.,

2023). Meanwhile, in a performance climate, success is measured based on final result and social comparisons with others (van de Pol et al., 2020). Research shows that a mastery climate contributes more to intrinsic motivation, exercise satisfaction, and athletes' mental health, while an exercise performance climate can increase pressure and the risk of burnout (McLaren et al., 2024; Wu & Du, 2021). Each athlete will have a different perception of this climate depending on their personal experiences, individual characteristics, and the type of sport they are involved in (Yang et al., 2023).

The motivational climate in sport is a representation of the psychosocial conditions that are formed in the training and competition environment, which indirectly or directly shape the way an athlete think, feels and acts (Thompson et al., 2022). This concept first developed from goal orientation theory, which explains that individuals view success in two main orientations, namely mastery orientation in this case, the characteristics of the sport, whether it is individual or team-based, are likely to influence athlete's motivational perceptions and experiences of the climate built around them (Robazza et al., 2022). This then opens up room for discussion to explore how different types of sports can have different impacts on the motivational climate felt by athletes (Lautenbach et al., 2021).

Team sports and individual sport have different structures, dynamics, and psychological needs, which ultimately influence athlete's motivational experiences in their sporting activities (Silva et al., 2022). In team sports such as soccer, futsal, volleyball, basketball, and whitewater rafting, success is highly dependent on team synergy, cooperation, and effective communication (McEwan et al., 2023). Athletes in a team are required to understand their respective roles, adapt to collective strategies, and be able to contribute within a structured framework (Alexander et al., 2024). Conversely, individual sports such as Martial arts, athletics, swimming, or tennis place more emphasis on self-control, personal emotion management, and full responsibility for the result obtained (Wang & Demerin, 2023). In the context of motivational climate, team sport athletes tend to be influenced by social factors and coaching leadership in shaping group dynamics that are supportive or even oppressive (Martínez-González et al., 2021). Meanwhile, individual sport athletes are more sensitive to personal recognition, direct performance evaluation, and interpersonal relationships with coaches (Kargapolova et al., 2022). Therefore, both require motivation to develop, the form of motivational

support needed can differ significantly. By paying attention to these fundamental differences, it is important to examine how perceptions of the motivational climate are formed differently in each type of sport. Comparative research on these to groups is expected to provide new insights into more effective and contextual coaching strategies and psychological approaches.

The differences in characteristics between team and individual sports, accompanied by variations in motivational orientation based on gender, indicate that the motivational climate is not uniformly formed among groups of athletes (Mosqueda et al., 2021). This research is important because it can enrich scientific literature while providing a stronger basis for coaches and sports institutions in creating and adaptive, responsive, and more effective coaching environment. Thus, this comparative analysis is expected to provide new insights into how gender and type of sport shape athletes' motivational experiences differently. As a continuation of the previous discussion, it is important to highlight the role of emotion regulation as a psychological factor that also shapes athletes' motivational responses. Emotional regulation helps athletes manage pressure, maintain focus, and stabilize internal drive when facing the demands of training and competition (Tamminen et al., 2021). Therefore, a study comparing the motivational climate of male and female athletes in team and individual sports is important to clarify how the interaction between gender, type of sport, and emotional regulation simultaneously shapes the motivational experience of athletes.

This approach is important, especially in the modern era training programs are required to be more personalized, contextual and evidence-based. By comparing two groups of athletes with different characteristics, we can identify common and unique patterns in their perceptions of the support, challenges, and expectations the experience in the training environment (Michel-Kröhler & Turner, 2022). Comparative studies also help coaches and sports practitioners tailor their communication approaches and psychological interventions to the needs of each type of athlete (Tóth et al., 2023). Furthermore, the results of such studies can form the basis for developing a more adaptive and inclusive sports coaching system, one that is not only performance-oriented but also focused on the psychological well-being of athletes (García-Herrero et al., 2022). By understanding the depth of the relationship between sport type and perceived motivational climate, we will be better prepared to design coaching policies and practices

that support the holistic growth of athletes. Therefore, efforts to conduct this research will be systematically directed to address these needs based on an empirical and measurable scientific approach.

In the context of the development of Indonesian sports science, which is increasingly moving towards a professional and data-driven approach, it is important to understand how athletes' perceptions of the motivational climate are formed and influenced by the type of sport they are engaged in (Raimundi et al., 2023). Indonesian athletes come from diverse social, cultural, and educational backgrounds, so a general coaching approach is often insufficient to address their psychological needs in depth (Williams et al., 2022). This highlights the importance of applying a comprehensive contextual approach, particularly in understanding the differences in motivational dynamics between team and individual athletes (Orbach, 2023).

Team sports emphasize social interaction and group dynamics, while individual sports rely more on personal responsibility and internal emotion regulation (Sari & Bizan, 2022). This study is relevant because it opens up space for exploration of how different sport structures influence athletes' perceptions of support, challenges, and expectations in the training environment. By highlighting these differences, this study presents a novelty in sport motivation literature, which has tended to neglect comparative aspects between these two types of athletes. This study aims to analyze differences in perceptions of motivational climate based on gender (male and female) and type of sport (team and individual) among active athletes.

Based on the theoretical description and background above, this study attempts to be based on the main question of how differences in perceptions of motivational climate arise among athletes with different characteristics, specifically, this study focuses on two distinguishing aspects, namely gender and type of sport. In this context, the questions arise as to whether there are significant differences in perceptions of motivational climate between male and female athletes, and whether there are differences in perceptions of motivational climate between athletes from team sports and individual sports. This question is basically for the comparative design used, with the aim of obtaining a more in-depth empirical picture of how these factors play a role in shaping athletes' motivational climate.

In line with the formulation of the problem, this study proposes the hypothesis that there are significant differences in the perception of motivational climate between male and female athletes, as well as between team and individual sport athletes. This hypothesis is based on the theoretical assumption that motivational orientation that develops in athletes. Thus, testing this hypothesis is expected to provide empirical evidence that strengthens the understanding of the relationship between athlete characteristics and the dynamics of the motivational climate they experience in the context of sport training and competition.

METHOD

This study used a descriptive comparative quantitative approach with a cross-sectional survey design to analyze differences in perceptions of motivational climate between male and female athletes in team and individual sports. The study populations included active athletes from various sports, with sampling using purposive sampling technique based on the criteria age 15-26 years, at least one year of training experience, and participation in official competitions, the sample size was 115 athletes, consisting of 62 male and 53 females, each from team and individual sports.

The perceived motivational climate in sport questionnaire-2 (PMCSQ-2) (Newton et al., 2000) and the Indonesian emotional regulation questionnaire for sport (IERQS) (Jannah et al., 2022). The PMCSQ-2 consists of 33 items across two dimensions task involving and ego involving using a 1-5 Likert scale, and has demonstrated strong construct validity and high reliability, including in the present study with a Cronbach's Alpha of 0.923. The IERQS employs a 1-4 Likert scale and has been validated for use with Indonesian athletes. Both instruments passed item total validity testing. Indicating that all items met the required criteria and were appropriate for assessing athletes' motivational climate and emotional regulation. The data were analyzed using descriptive and inferential statistics through normality and homogeneity test, as well as an independent sample t-test to identify differences between groups. The entire research process was carried out in accordance with the principles of sport research ethics, including participant consent and data confidentiality.

RESULT AND DISCUSSION

RESULT

The Kolmogorov Smirnov normality test shows that motivation variable has a Statistic value of 0.066 with a sample size of 115 and a significance value of 0.200, which means that the data is normally distributed because the Sig. value is >0.05 . conversely, the emotion variable obtained a statistic value of 0.101, df 115, and a significance value of 0.006, so it was declared nor normally distributed because the sig. value <0.05 . the result indicate that the motivation data meets the normality assumption, while the emotional data shows a deviation from the normal distribution. The 33 items indicate that the instrument used has very high level of internal consistency. An alpha value above 0.09 indicates that all items in the questionnaire are strongly correlated and capable of measuring the construct a stable manner. Thus, the research instrument can be considered highly reliable and sustainable for use in data collection in this study.

Table 1. Sociodemographic

Descriptive	<i>n</i>	%
Gender		
Male	62	53,9
Female	53	46,1
Years of Sport Experience		
0-1 year	3	1.5
1-3 year	14	7
3-5 year	22	11
5-10 year	31	15.5
>10 year	33	16.5
Type of sport		
Tim	57	49,6
Individual	58	50,4

Based on the result of descriptive analysis, the characteristics of respondents in this study show that the athlete group consisted of 62 males (53.9%) and 53 females (46.1%), so that the propotion of participants was relatively balanced with a slight tendency for males to be slightly greater in number. The distribution of length of experience as an athlete also shows variation in sporting experience, with 3 respondents (1.5%) in the 5-10 year category, 14 respondents (7%) in the 1-3 year category, 22 respondents (11%) in the 3-5 year category, 31 respondents (15.5%) in the 5-10 year category, and 33 respondents (16.5%) had more than 10 years of experience. In addition,

based on the type of sport, 57 respondents (49.6%) were team sport athletes and 58 respondents (50.4%) were individual sport athletes, indicating that the proportion of both groups was representative enough for further analysis in this study.

Table 2. independent samples t-test Male and Female

	Male		Female		<i>t</i>	<i>p</i>	Cohens's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Motivational Climate	124.35	22.688	121.98	15.274	.666	.507	0.122
Climate involving ego	47.69	15.193	51.19	13.752	-1.284	.202	0.24
Climate involving task	73.56	12.793	74.42	9.202	-.403	.688	0.076
Emotional Regulation	31.92	4.853	31.68	4.159	.282	.778	0.053
Reappraisal	19.65	3.455	19.43	2.859	.353	.724	0.069
Suppression	12.27	2.600	12.25	2.571	0.60	.952	0.008

The result of the independent samples t-test show that there is no significant difference between male and female athletes in the motivational climate variable, with an average score of 124.35 ± 22.69 for males and 121.98 ± 15.27 for females, and a t-value of 0.666, $p = 0.507$, and Cohen's $d = 0.122$, indicating a very small effect. In the climate involving ego dimension. The average for males (47.69 ± 15.19) and females (51.19 ± 13.75) also showed no significant difference ($t = -1.284$, $p = 0.202$, $d = 0.24$). Similarly, on the climate involving task dimension, the scores of men (73.56 ± 12.79) and women (74.42 ± 9.20) did not differ significantly ($t = -0.403$, $p = 0.688$, $d = 0.076$).

The emotional regulation variable showed a similar pattern, with male (31.92 ± 4.85) and female (31.68 ± 4.16) score that were not significantly different ($t = 0.282$, $p = 0.778$, $d = 0.053$). On the reappraisal subscale, the mean scores for males (19.65 ± 3.46) and females (19.43 ± 2.86) did not differ ($t = 0.352$, $p = 0.724$, $d = 0.069$), while the suppression subscale also showed consistent result, where males (12.27 ± 2.60) and females (12.25 ± 2.57) did not differ significantly ($t = 0.060$, $p = 0.925$, $d = 0.008$). Overall, these results indicate that there are no significant differences between male and female athletes in terms of motivational climate and emotional climate regulation, with all effect sizes falling into the very small category.

Table 3. independent samples t-test Individual and team

	Individual sport		Team sport		<i>t</i>	<i>p</i>	Cohens's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Motivational Climate	123.86	20.712	122.67	18.557	-0.324	.747	0.06
Climate involving ego	50.95	14.323	47.69	14.791	-1.200	.233	0.223
Climate involving task	72.91	11.924	74.98	10.531	.987	.326	0.184
Emotional Regulation	31.44	4.322	32.17	4.732	.868	.387	0.161
Reappraisal	19.19	3.308	19.90	3.042	1.188	.238	0.223
Suppression	12.25	2.627	12.28	2.546	.063	.950	0.012

The result of the independent samples t-test show that there is no significant difference between individual and team athletes in the motivational climate variable, with an average score of 123.86 ± 20.71 for individual sports and 122.67 ± 18.56 for team sports, ($t = 0.324$, $p = 0.747$, $d = 0.06$). indicating a very small effect. In the climate involving ego dimension, individual athletes obtained an average of 50.95 ± 14.32 , while team athletes obtained 47.69 ± 14.79 , but the difference was not significant ($t = -1.200$, $p = 0.223$, $d = 0.223$). similar result were seen in the climate involving task dimension, where individual athletes scored 72.91 ± 11.92 and team athletes scored 74.98 ± 10.53 , with $t = 0.987$, $p = 0.326$, and $d = 0.184$, indicating no significant difference.

On the emotion regulation variable, the average for individual athletes was 31.44 ± 4.32 and for team athletes was 32.17 ± 4.73 , also showing no significant difference ($t = 0.868$, $p = 0.387$, $d = 0.161$). the reappraisal subscale showed an average score of 19.19 ± 3.31 for individual athletes and 19.90 ± 3.04 for team athletes, with no significant difference ($t = 1.199$, $p = 0.238$, $d = 0.223$). similarly, on the suppression subscale, the difference between individual athletes (12.25 ± 2.63) and team athletes (12.28 ± 2.55) was not significant ($t = 0.063$, $p = 0.950$, $d = 0.012$). overall all variables showed no significant differences between individual and team athletes, with effect sizes in very small category, indicating that the characteristics of the sport did not have a substantial influence on athletes perceptions of motivational climate or emotional regulation.

DISCUSSION

The purpose of this study is to identify differences in perceptions of motivational climate and emotional regulation as forms of self-regulation in athlete based on gender and sport type. Motivational climate, which includes the dimensions of task-involving climate and ego-involving climate, is an important psychological aspect that determines how athlete assess the quality of coaching, competitive demands, and social support in the training environment. Emotional regulation, which consists of reappraisal and suppression strategies, is also an important indicator of an athlete's ability to manage the emotional pressure that arises during training and competition. This objective was formulated to gain a more comprehensive understanding of motivational and emotional dynamics in the context of modern sports coaching.

The result of the study show that male and female athletes' perceptions of task-involving climate are at relatively similar levels. This trend reflects that the orientation towards effort, hard work, skill improvement, and support for individual development is applied consistently to all athletes without any gender-based differences in treatment. This similarity in perception leads to the understanding that the coaching values emphasized by the coach play a more dominant role than biological factors in shaping the motivational climate. The consistency of coaching received by both groups also shows that training experience has a stronger contribution in shaping task orientation than personal characteristics.

Analysis of the ego-involving climate shows similar patterns of results. Male and female athletes assess their orientation toward result, competition among peers, and emphasis on achieving peak performance in a framework that is not significantly different. The closeness of scores between the two groups shows that the coaching environment does not create different competitive pressures based on gender. Performance evaluations and coach's expectations appear to be communicated equally, so that athletes perceive ego orientation in equal measure. This uniformity of perception shows that the coaching structure that has been implemented balances competitive demands without creating differentiation based on gender identity.

A comparison between team and individual athletes shows no difference in task-involving or ego-involving dimensions. This similarity in perception indicates that

emompetitive values, training patterns, and coaching styles have a uniform impact regardless of differences in the structure of sporting activities. Athletes in team and individual sports appear to be in a coaching system that applies the same standards in terms of emphasizing skill development, performance evaluation, and feedback. The regularity of the coaching system creates a consistent motivational perception among all athletes, so that the characteristics of the sport do not become the main determinant in shaping the motivational climate.

An evaluation of emotional regulation consisting of reappraisal and suppression strategies shows that athletes' self-regulation abilities do not differ significantly based on gender or sport type. The very small variation in the average values of these two strategies indicates that emotional adaptation develops through repeated training experiences, exposure to competitive pressure, and habituation to intense emotional situations. A training process that emphasizes mental resilience and self-control contributes to uniformity in emotional regulation abilities across all groups of athletes. Equal psychological training and competitive experience gained by athletes are important foundations for the development of uniform self-regulation abilities. Finding regarding data distribution show that the motivational variable has a normal distribution, while the emotional regulation variable shows a non-normal distribution. The irregular distribution in emotional regulation indicates a wider variety of emotional experiences among athletes, which is related to intrapersonal factors such as emotional stability, competitive experience, and personality traits.

The strength of the study lies in the use of standard instruments with high reliability, a balanced sample composition, and an analysis that covers both dimensions of motivational climate and emotional regulation. The overall result provides a comprehensive picture of the psychological dynamics of athletes in the context of uniform coaching. The limitations of the study are evident in its cross-sectional design, which does not allow for the observation of long-term psychological changes, and its failure to take into account contextual factors such as training insensitivity, coach-athlete relationships, and competition levels. The application of longitudinal methods and multivariate analysis in future studies is expected to capture the more complex relationship between motivational, emotional and coaching environment variables.

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