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Psychological Needs Satisfaction and Thwarting, Burnout, and Controlling Coach Behaviors among Athletes: A Structural Model on Team Climate

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Abstract

Background: Sports participation offers benefits and challenges in one's mental health. The climate within a team plays a pivotal role in shaping how these experiences either undermine or enhance an athlete's well-being.
Aims: The study aimed to assess the levels of psychological need satisfaction (PNS), psychological need thwarting (PNT), burnout (BO), controlling coach behaviors (CCB), and team climate (TC) among athletes. It also examined the correlations among these variables, identified the best predictors of team climate, and proposed the best-fit model explaining team climate in a sports context.
Methods: A descriptive-correlational design and Structural Equation Modeling (SEM) were used to analyze data from 57 competitive athletes. The statistical tools used were mean and SD for the levels, Pearson r for correlations, multiple linear regression for predictors, and SEM for the model parsimony.
Result: Athletes reported moderate to high levels across variables. TC was positively associated with PNS and negatively with PNT and BO. The strongest positive predictor of TC was PNS. Interestingly, BO showed a positive association with TC. Four models were generated, and the fourth model emerged as the best fit model. PNT indirectly undermined TC by increasing BO. CCB did not directly affect TC but contributed to BO, and PNS directly improved TC.
Conclusion: PNS emerges as the strongest predictor of TC, while PNT hinders it. BO positively influenced TC. CCB did not directly affect TC. The findings highlight the importance of athlete-centered coaching in fostering supportive teams and well-being.

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INTRODUCTION

The study examines how team climate (TC) among athletes is affected by psychological variables like psychological need satisfaction (PNS), psychological need thwarting (PNT), burnout (BO), and controlling coach behaviors (CCB). Participation in sports offers both benefits and challenges in one's mental health. Student-athletes faced mental health difficulties such as high levels of stress and various demands related to personal life, academics, and sports engagement (Shanon et al., 2020). The climate within a team plays a pivotal role in molding how these experiences either undermine or enhance the well-being of athletes. Despite the growing interest in research regarding how psychological factors affect sports performance, limited studies have explored how these psychological variables, like PNS, PNT, BO, and CCB, influence team climate among athletes. A study by Hagiwara et al. (2021) highlights that teammates' social support contributes significantly to athletes' mental health. The Self-Determination Theory by Deci and Ryan (2000) explains this further, revealing that satisfying one's basic psychological needs (autonomy, competence, and relatedness) will lead to an improved well-being, greater motivation, and increased engagement.

Coaches and teammates are very important in supporting or obstructing these psychological needs in a team. Athletes feel a high level of need satisfaction and prosocial behavior when they are

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in an autonomy-supportive environment (Leduc et al., 2024), unlike controlling environments, which promote feelings of distress and antisocial outcomes among athletes (Hodge & Gucciardi, 2015). A study by Toyama et al. (2020) highlights how controlling coach behaviors, like excessive pressure or intimidation, increase a feeling of amotivation and reduce psychological safety among athletes, contrary to a positive climate fostered through supportive coaching. The coach-athlete bond was a protective factor during challenges faced by athletes, whether personal or performance-related (Davis et al., 2019; Li et al., 2020).

Burnout is another relevant factor closely tied to the social dynamics in team environments. Positive climates that focus on mastery and personal growth were found to be associated with lower burnout rates (Won, 2021), while competitive climates often increase disengagement and emotional exhaustion among athletes. A study by Habeeb et al. (2023) revealed that peer support and leadership have been found to buffer athletes from experiencing burnout, emphasizing the importance of team dynamics in maintaining well-being among athletes.

Although the effects of PNS, PNT, BO, and CCB have been studied individually in terms of their effect on team environments, limited studies have examined how these psychological and interpersonal factors collectively influence TC among athletes. This study sought to fill this gap by investigating the relationships among PNS, PNT, BO, CCB, and TC in a unified model. Specifically, this aims to: (1) determine the levels of these variables among athletes; (2) examine their relationships; (3) identify key predictors of team climate; and (4) establish a structural model to explain how these factors shape team climate. By integrating these constructs, the research contributes to a clearer understanding of the psychological mechanisms that can foster a positive or a negative team climate among athletes. The result can be a baseline for developing coaching strategies and sports policies to optimize athlete engagement, performance, and well-being.

METHOD

Research Design

This study utilized a quantitative design, specifically a non-experimental, descriptive-correlational approach, to examine the relationships among PNS, PNT, CCB, BO, and TC. The aim was to describe patterns and associations contributing to understanding team climate in competitive sports. Structural Equation Modeling (SEM) was also employed to assess structural relationships among variables, as it is ideal for testing complex theoretical models. SEM allows simultaneous examination of multiple dependent and independent relationships within a single framework.

Respondents

The respondents were 57 competitive athletes aged 16 to 30 from Mati, Davao Oriental, Philippines. These athletes represented various sports and actively competed in regional, national, and international competitions. Athletes who were not officially registered with the City Sports Development Office or had no documented history of competitions were excluded from the study. Although the sample size is small, Iacobucci (2010) indicated that a sample of 50 is already sufficient for SEM, especially in models of moderate complexity. This sampling ensured respondents had relevant experience and insights into team dynamics and psychological demands in competitive sports.

Instrument

Five standardized instruments were used to measure the key variables, each employing a 7-point Likert scale. The Psychological Need Satisfaction Scale of Gunnel et al. (2013) measured autonomy (α=0.92), competence (α=0.91), and relatedness (α=0.94), all showing excellent internal consistency. To assess psychological need thwarting, the Psychological Need Thwarting Scale by Bartholomew et al. (2011) was utilized, assessing autonomy thwarting(α=0.81), competence thwarting (α=0.85), and reliability thwarting (α=0.92), indicating good to excellent reliability.

The Controlling Coach Behaviors Scale by Bartholomew et al. (2010) measured athletes' perceptions of negative coaching behaviors – negative conditional regard, intimidation, controlling use of rewards, and excessive personal control – demonstrated Cronbach's alpha values ranging 0.66-0.83, where alpha value of 0.60 may be suitable for well-established scales with a limited number of items (Hair et al., 2006). The Athlete Burnout Questionnaire (Isoard-Gautheur et al., 2017) measured

burnout – emotional and physical exhaustion, sports devaluation, and reduced sense of accomplishment – with α values ranging from 0.74 to 0.89, all indicating acceptable reliability. The Sports Climate Questionnaire of Therrien (2009) assessed perceptions of the team environment. Subscales had α values from 0.670 to 0.886. All instruments had previously been validated for use in athletic contexts, and factor analysis in this study further confirmed their structural integrity. Table 1 summarizes the instruments' scale names, the number of items per instrument, and their reliability.

Table 1. Instrument Summary

Scale Name	Number of Items	Reliability
Psychological Need Satisfaction Scale	18	α = 0.91 to 0.94
Psychological Need Thwarting Scale	12	α = 0.81 to 0.91
Controlling Coach Behaviors Scale	15	α = 0.66 to 0.83
Athlete Burnout Questionnaire	20	α = 0.74 to 0.89
Sports Climate Questionnaire	37	α = 0.67 to 0.89

Procedures

Prior to data collection, formal approval was secured from the City Sports Development Office of the City of Mati. Coaches were coordinated to administer the surveys. Respondents received a clear explanation of the study's purpose and were assured of confidentiality and voluntary participation. Informed consent was obtained from all the respondents, and parental consent was secured for athletes under 18. Data collection was completed over seven weeks, accommodating the athletes' schedules to avoid interference with training and competitions. The responses were reviews, and incomplete or invalid entries were excluded to maintain integrity.

Data Analysis

Various statistical techniques were used to address the objectives of the study. Means and standard deviations were calculated to determine the overall levels of each variable. The Pearson r was utilized to analyze the relationships among variables. Multiple linear regression analysis was conducted to identify the strongest predictors of team climate. Finally, SEM was used to test the hypothesized model using Analysis of Moment Structures (AMOS) software. To determine the robustness and adequacy of the generated model, CMIN/DF, p-value, RMSEA, GFI, TLI, and NFI were evaluated.

Hypotheses

This study hypothesizes that: H_{01} – there is no significant correlation among PNS, PNT, BO, CCB, and TC; H_{02} – the PNT, PNT, BO, and CCB do not significantly predict TC; and H_{03} – there is no model can explain the mechanisms shaping team climate among athletes.

RESULTS AND DISCUSSION

Results

This section presents and interprets the findings of the study based on the data gathered from the respondents. The results are organized according to the specific objectives. Statistical analyses such as descriptive statistics, correlation, regression, and structural equation modelling were conducted to: describe the levels of PNT, PNST, BO, CCB, and TC; examine the relationships among variables; determine the extent to which variables predict TC; and establish the most parsimonious model of the study.

Exhibited in Table 2 are the levels of exogenous and endogenous variables of the study. The PNS, PNT, BO, and CCB are exogenous variables, while the TC is endogenous. Among all variables, PNS obtained the highest mean, with 5.97, which is described as high. Meanwhile, PNT, BO, and CCB achieved a mean score of 3.30, 3.00, and 2.90, respectively, all indicated as partially low. On the other hand, TC obtained a mean of 5.53, which is described as high.

Table 2. Level of Exogenous and Endogenous Variables

LEVELS		Mean	SD	Descriptive Level
Exogenous Variables	Psychological Needs Satisfaction	5.97	1.45	High
	Psychological Needs Thwarting	3.30	2.00	Partially Low
	Burnout	3.00	1.82	Partially Low
	Controlling Coach Behavior	2.90	2.07	Partially Low
Endogenous Variable	Team Climate	5.53	1.50	High

The perceived PNS was rated as high. This suggests that athletes feel competent, autonomous, and connected in their sports environment. Satisfying these needs enhances the well-being of athletes. That is why sports environments should be safe spaces that nurture student-athletes' mental health (Turgeon e al., 2022). Conversely, PNT was rated as partially low, indicating that athletes only experience their psychological needs rarely obstructed. According to the Basic Psychological Needs Theory, when autonomy, competence, or relatedness are frustrated, even in sports, it can result in feelings of exclusion, loneliness, and psychological distress.

Meanwhile, BO was also rated as partially low, suggesting that athlete burnout was minimal among athletes; thus, coaches should be attentive and responsive to signs of burnout to prevent serious long-term effects (Pulido et al., 2023). Additionally, CCB was also rated as partially low, indicating that athletes did not frequently experience overly controlling behaviors from their coaches. Controlling coach behaviors impose pressure, coercion, and authoritarianism on athletes (Mossman et al., 2022). Lastly, TC received a high rating, with key aspects such as trust and recognition, sports organizational support, team support, fairness, innovation, task cohesion, and pressure (Therrien, 2009), suggesting that athletes perceived a supportive and fair team environment.

As presented in Table 3, the correlation analysis examined the relationships between the exogenous variables (PNS, PNT, BO, CCB) and team climate.

Table 3. Significant Relationships Between Psychological Needs Satisfaction, Psychological Need Thwarting, Burnout, and Controlling Coach Behavior to Team Climate

Exogenous Variables	*p*-value	*r*-value		Decision
Psychological Needs Satisfaction	0.000	0.545	**	Reject H_{02}
Psychological Need Thwarting	0.006	-0.362	**	Reject H_{02}
Burnout	0.016	-0.200	*	Reject H_{02}
Controlling Coach Behavior	0.264	-0.150		Do not reject H_{02}

Dependent Variable: Team Climate

**Correlation is significant at the 0.01 level (2-tailed).
*Correlation is significant at the 0.05 level (2-tailed).

PNS revealed a significant positive correlation with TC (r = 0.545, p = 0.000), indicating that athletes who felt their psychological needs were met perceived a more positive team climate. In contrast, PNT had a significant negative correlation with TC (r=-0.362, p=0.006), suggesting that the more an athlete's psychological needs were obstructed, the more they perceived a more negative team climate. These two findings suggest that as athletes' psychological needs satisfaction increases, team climate improves, and as their psychological needs are thwarted, they perceive their team environment negatively. Similarly, BO was negatively correlated with TC (r=-0.200, p=0.016), implying that athletes who experienced higher levels of burnout were most likely to view their team climate negatively. This means that higher levels of burnout are associated with a poorer team climate, with athletes less likely to engage positively with their teammates and more likely to view the team climate as unsupportive.

However, the correlation analysis revealed that CCB did not have a significant relationship with TC (r=-0.150, p=0.264), meaning that the level of controlling behaviors exhibited by coaches was not directly linked to how athletes perceived their team climate. While controlling coaching behaviors can negatively impact individual athletes' psychological needs satisfaction and motivation, this study suggests that these behaviors do not have a statistically significant direct effect on the overall team climate.

Table 4 presents the multiple regression analysis among variables, investigating the best variables to predict TC. The model was significant (F=13.272, p-0.000), with an R^2 value of 0.505, indicating that the predictor variables can explain 50.5% of the variance in TC.

Table 4. The Influence of Psychological Needs Satisfaction, Psychological Need Thwarting, Burnout, and Controlling Coach Behavior on Team Climate

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.695	0.642		4.197	0.000
Psychological Needs Satisfaction	0.559	0.091	0.626	6.128	0.000
Thwarting	-0.331	0.079	-0.504	-4.192	0.000
Burnout	0.328	0.108	0.423	3.052	0.004
Controlling Coach Behavior	-0.104	0.082	-0.159	-1.269	0.210

a. Dependent Variable: Team Climate

b. Note: R = 0.711[a], R^2 = 0.505, F-ratio = 13.272, p-value = 0.000[b]

Among the predictors, PNS had the strongest positive influence (B=0.559, β = 0.626, t = 6.128, p = 0.000), confirming that athletes who experienced higher levels of need satisfaction were more likely to perceive a positive TC. In contrast, PNT was a significant negative predictor (B=-0.331, β=-0.504, t = -4.192, p = 0.000), suggesting that athletes who frequently experienced their psychological needs being obstructed perceived a weaker TC. Interestingly, BO emerged as a positive predictor (B = 0.328, β = 0.423, t = 3.052, p = 0.004), implying that some level of burnout might contribute to a shared team experience, possibly fostering a sense of unity among athletes. Meanwhile, CCB was not a significant predictor of TC (B=-0.104, β=-0.159, t=-1.269, p=0.210), reinforcing that the extent to which coaches exhibited controlling behaviors did not substantially influence how athletes perceived their team climate. Figure 1 shows the initial model developed for this study.

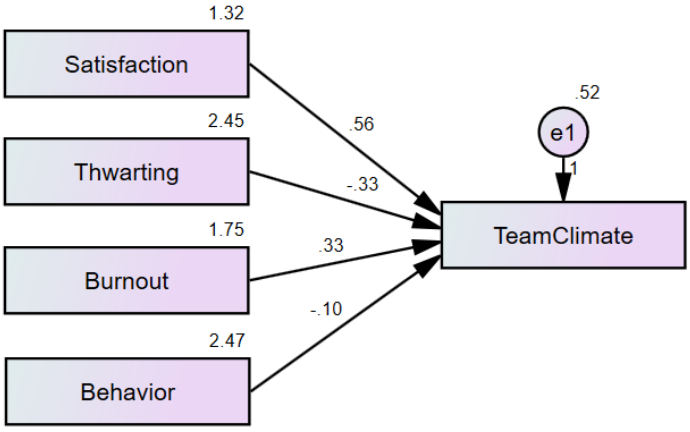

Figure 1. Generated Model 1

The generated model 1 illustrates the direct relationship of the exogenous variables (PNS, PNT, BO, and CCB) to TC. The PNS (1.32) is shown as a predictor of TC, with a path coefficient of 0.56; PNT (2.45) negatively affects TC with a path coefficient of -0.33; BO (1.75) has a 0.33 effect on TC; and CCB shows a -0.10 relationship with TC. As revealed, this model explained 52% of the data.

However, it can be observed in Table 5 - the characterization of the generated model-that the values of fit indices: CMIN/DF (Minimum Discrepancy over Degrees of Freedom) =8.818; p-value = 0.000; RMSEA (Root Mean Square of Error Approximation) =0.374; GFI (Goodness of Fit Index) = 0.727; CFI (Comparative Fit Index) =0.430; TLI (Tucker Lewis Index) =0.050; and NFI (Normed Fit Index)=0.427, are not fit, indicating a poor fit model.

The generated model 1 is not fit, but the multiple regression analysis revealed that PNS and BO were good predictors of TC. Based on this result, the next iteration's focus is on finding the strongest possible relationships between the variables through covariance and regression (see Figure 2).

Table 5. Characterization of Generated Model 1

Types of Model Fit	Parameters	Results	Critical Values	Remarks
Parsimonious Model Fit	CMIN/DF	8.818	< 2.00	Not Fit
Absolute Model Fit	p-value	0.000	> 0.05	Not Fit
	RMSEA	0.374	< 0.05	Not Fit
	GFI	0.727	> 0.95	Not Fit
Incremental Model Fit	CFI	0.430	> 0.95	Not Fit
	TLI	0.050	> 0.95	Not Fit
	NFI	0.427	> 0.95	Not Fit

Figure 2 displays the generated model 2, which illustrates the indirect relationship and interrelationship between PNT and CCB to TC and the direct relationship between PNS and BO to TC. This is the improved model of the generated model 1.

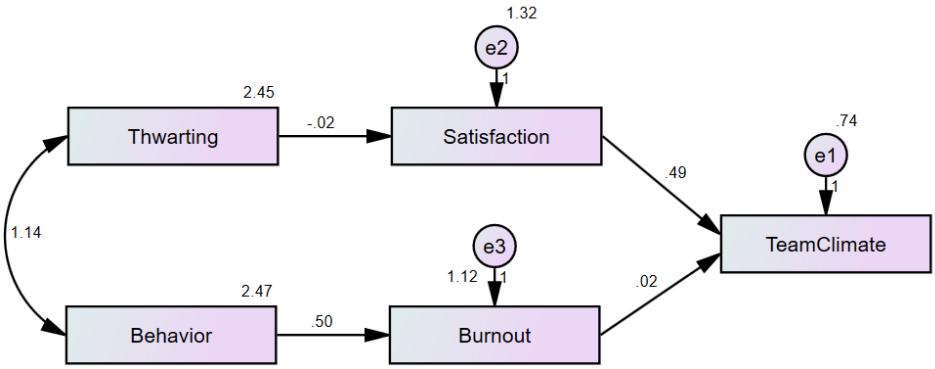

Figure 2. Generated Model 2

As depicted, PNT (2.45) negatively affects PNS with a path coefficient of -0.02, whereas CCB (2.47) positively influences BO with a path coefficient 0.50. PNT and CCB are also correlated with a covariance of 1.14. PNS is a significant predictor of TC, with a path coefficient of 0.49, whereas BO has a minimal effect on TC (0.02). This model can explain 74% of the data collected by the study. It shows that CCB has a positive effect on BO but has an indirect effect on TC. PNS has a positive effect on TC, while BO has less of an effect. Table 6 shows the fitness of Figure 2. This reveals the parsimonious and absolute model fit indices did not meet the critical values. Additionally, only CFI and NFI were satisfied in the incremental model fit.

Table 6. Characterization of Generated Model 2

Types of Model Fit	Parameters	Results	Critical Values	Remarks
Parsimonious Model Fit	CMIN/DF	2.809	< 2.00	Not Fit
Absolute Model Fit	p-value	0.04	> 0.05	Not Fit
	RMSEA	0.122	< 0.05	Not Fit
	GFI	0.890	> 0.95	Not Fit
Incremental Model Fit	CFI	0.957	> 0.95	Fit
	TLI	0.794	> 0.95	Not Fit
	NFI	0.951	> 0.95	Fit

The next iteration improves Figure 2. The generated model 3, as seen in Figure 3, illustrates the relationships between the exogenous and endogenous variables, explaining 74% of the data collected in the study.

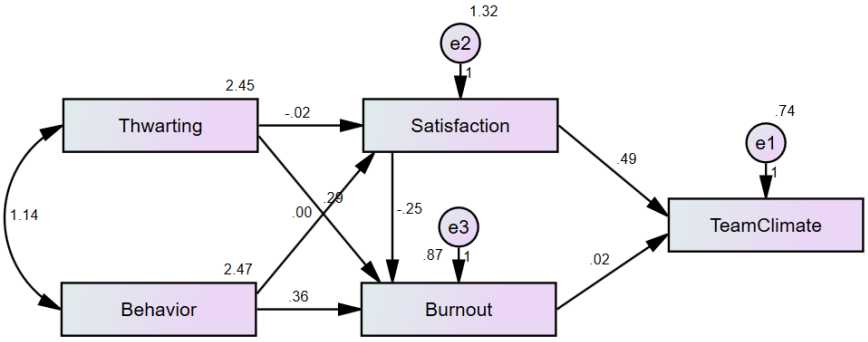

Figure 3. Generated Model 3

(PNT (2.45) is shown as a negative predictor of PNS, with a path coefficient of -0.02, while CCB (2.47) directly affects BO (0.36) and PNS (0.00). PNS positively influences TC, with a path coefficient of 0.49, whereas BO has a minimal effect on TC (0.02). Furthermore, BO is negatively influenced by PNS (-0.25) and positively affected by PNT (0.29). The correlation between PNT and CCB is 1.14, signifying an interrelationship between these variables. Table 7 explained a significant portion of the data.

Table 7. Characterization of Generated Model 3

Types of Model Fit	Parameters	Results	Critical Values	Remarks
Parsimonious Model Fit	CMIN/DF	1.504	< 2.00	Fit
Absolute Model Fit	p-value	0.170	> 0.05	Fit
	RMSEA	0.02	< 0.05	Fit
	GFI	0.980	> 0.95	Fit
Incremental Model Fit	CFI	0.958	> 0.95	Fit
	TLI	0.972	> 0.95	Fit
	NFI	0.954	> 0.95	Fit

The characterization of the generated model indicates that the values of the fit indices have significantly improved: CMIN/DF (1.504), p-value (0.170), RMSEA (0.02), GFI (0.980), CFI (0.958), TLI (0.972), NFI (0.954). The values met the acceptable criteria, indicating that the model fit well. With all the parameters meeting the standards, the subsequent iteration will focus on refining Figure 3 to develop the best-fit model. Figure 4 exhibits the generated model 4 of the study.

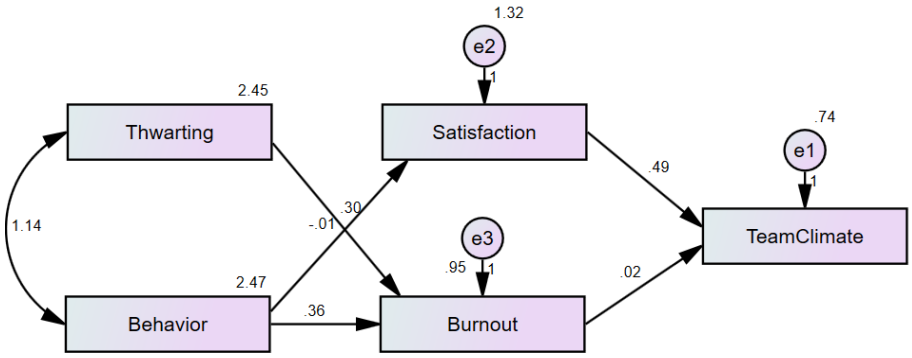

Figure 4. Generated Model 4

The generated model 4 aligns closely with the observed data and demonstrates superior fitness metrics compared to the previously generated models, ensuring its reliability and validity for further analysis and application within the study. The model accounts for 74% of the TC data. The PNT (2.45) is shown as a predictor of BO with a path coefficient of 0.30, while CCB (2.47) influences both PNS (-0.01) and BO (0.36). BO directly influences TC (0.02). Additionally, the interrelationship between PNT and CCB is 1.14, indicating a strong interrelationship between these variables. Table 8

provides an in-depth analysis of the model fitness metrics for the model depicted in Figure 4, confirming that all established criteria are met.

Table 8. Characterization of Generated Model 4

Types of Model Fit	Parameters	Results	Critical Values	Remarks
Parsimonious Model Fit	CMIN/DF	1.102	< 2.00	Fit
Absolute Model Fit	p-value	0.120	> 0.05	Fit
	RMSEA	0.02	< 0.05	Fit
	GFI	0.981	> 0.95	Fit
Incremental Model Fit	CFI	0.958	> 0.95	Fit
	TLI	0.972	> 0.95	Fit
	NFI	0.956	> 0.95	Fit

Presented in Table 9 is a comparison of the characterization of the hypothesized models.

Table 9. Comparison of the Characterization of Generated Models

Model	CMIN/DF (<2.00)	p-value (>0.05)	RMSEA (<0.05)	GFI (>0.95)	CFI (>0.95)	TLI (>0.95)	NFI (>0.95)	Fit Status
1	8.818	0.000	0.374	0.727	0.430	0.050	0.427	Not Fit
2	2.809	0.040	0.122	0.890	0.957	0.794	0.951	Not Fit
3	1.504	0.170	0.020	0.980	0.958	0.972	0.954	Fit
4	1.102	0.120	0.020	0.981	0.958	0.972	0.956	Best-Fit

Among the four models generated, Model 4 stands out as the best-fitting model, surpassing Models 1, 2, and 3 across all major fit indices. Model 1 demonstrated poor fit, with a high CMIN/DF of 8.818, a significant p-value of 0.000, and very low values across RMSEA (0.374), GFI (0.727), CFI (0.430), TLI (0.050), and NFI (0.427), indicating serious model misfit. Model 2 showed some improvement (CMIN/DF = 2.809; CFI = 0.957), yet its RMSEA of 0.122 and TLI of 0.794 still failed to meet the accepted thresholds, suggesting inadequate model structure. Model 3 met all the critical criteria for acceptable fit (CMIN/DF = 1.504, RMSEA = 0.020, and all fit indices above 0.95), making it a valid model. However, Model 4 outperformed all others, with the lowest CMIN/DF (1.102), strong non-significant p-value (0.120), and slightly higher or equal values for GFI, CFI, TLI, and NFI. Figure 5 highlights the comparison of model fit indices, showing Model 4 is the most robust and preferred representation of the hypothesized relationships among the variables.

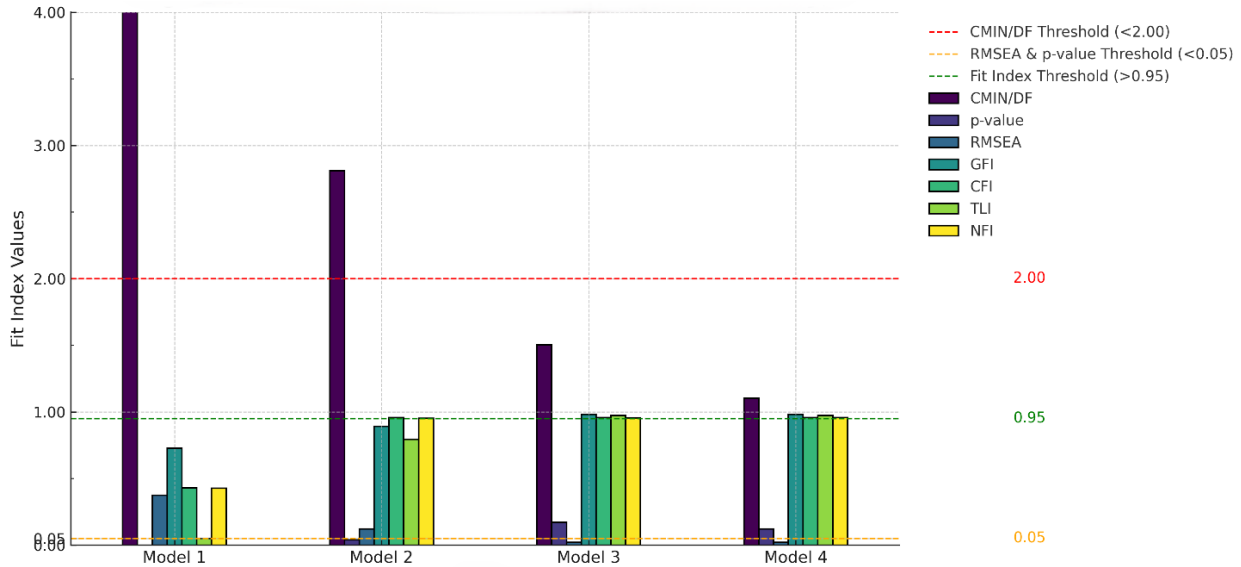

Figure 5. Model Fit Indices Comparison

Discussion

This study provides relevant insights into PNS, PNT, BO, CCB, and TC relationships. The findings align with established theoretical frameworks and reveal the importance of creating a

supportive environment that protects athletes' psychological well-being. A significant correlation between PNS and TC suggests that when athletes' need for competence, autonomy, and relatedness is satisfied, they tend to view their team environment more positively. This supports Leduc et al. (2024), who emphasized that team identification and high-quality leader-member exchanges are positively associated with PNS among athletes. These factors contribute to a motivationally supportive climate that fulfills athletes' PNS. Furthermore, research also states that PNS is linked to effective coping strategies, positive emotions, and adaptive biopsychosocial responses. As a result, the null hypothesis claiming no significant relationship between PNS and TC is hereby rejected.

The significant negative relationship between PNT and TC reinforces the earlier findings. When athletes experience frustration of their need for autonomy, competence, or relatedness, they are more likely to perceive the team climate as unsupportive. This aligns with Quested et al. (2021), who argue that need-thwarting environments can trigger frustration, disengagement, and psychological strain. This finding highlights the relevance of avoiding environments that harm individual well-being and team functioning. Given this, the null hypothesis claiming that PNT and TC have no significant correlation is hereby rejected.

Burnout was negatively correlated with TC. Athletes who experienced exhaustion, reduced sense of accomplishment, and sports devaluation are less likely to view their team environment positively. This aligns with Dišlere et al. (2025), who found that burnout is associated with eroded interpersonal relationships and deteriorated well-being in athletes. An unexpected but noteworthy finding was that burnout also positively predicted team climate – a result that appeared contradictory but reflects the unique context of high-performance sports. Urien et al. (2021) introduced a multi-level model showing how BO emerges at individual and team levels and impacts team effectiveness. While shared adversity may sometimes promote team cohesion, burnout must be monitored carefully. Coaches shall attend to stressors that athletes may experience, as it may diminish well-being and influence mental health symptoms such as burnout (Reardon et al., 2019). With this finding, the null hypothesis claiming that BO and TC have no significant relationship is hereby rejected.

Another study result was that CCB is not significantly correlated with TC. Although CCB can harm individual athletes, it may not influence how the team perceives its climate. However, this does not mean that CCB is harmless, as studies by Choi et al. (2020) revealed that controlling coach behaviors can increase burnout among athletes, as mediated by communication and the coach-athlete relationship. Similarly, Duhaylungsod et al. (2025) reported that a supportive coach-athlete relationship significantly reduces BO. In addition, Setiawan et al (2023) identified a positive relationship between the coach-athlete relationship and performance motivation, facilitated through emotional understanding, commitment, and complementary behavior. However, CCB is not directly associated with a team's competition success (Van et al., 2024). These findings highlight the importance of addressing CCB within sports teams to safeguard athletes' well-being. Given the result, the null hypothesis is not rejected, as it has been revealed that CCB and TC do not have a significant relationship.

The generated model 4 was the best fit model of the study; see Figure 4, which reveals the relationship among variables. There was an interrelationship between PNT and CCB, where CCB directly and indirectly affects BO, and indirectly affects TC, and PNT directly and indirectly affects BO and indirectly affects TC. The result of the study of Beattie and Turner (2022), which highlights the need for coaches to foster and maintain positive relationships with athletes and for administrators to support coaches in those efforts, negates the indirect positive effect of CCB on TC. The relationships between PNT, CCB, and BO are supported by the study of Morales-Sanchez et al. (2020), revealing that controlling coaching style predicts psychological need thwarting and predicts burnout among athletes, in their study among adolescent soccer players. Furthermore, a study by Woods et al. (2022) supports the relationship between psychological needs and BO, whereas the needs for autonomy, competence, and relatedness are negatively associated with BO. Another study by Cho et al. (2019) highlights the indirect effect of controlling coaching behaviors on athlete burnout; however, it is mediated by competitive trait anxiety. These findings are important, especially in crafting structural models on team climate, which is a construct that is not well-studied.

Another significant finding in the model is that PNS, as negatively affected by CCB and indirectly affected by PNT, was the strongest positive predictor of TC. With TC often overshadowed

by a more commonly studied construct – motivational climate – results of various studies revealed similar findings to those of the study conducted. A study by Trbojevic and Petrovic (2020) revealed that satisfying athletes' basic psychological needs significantly relates to a positive task-involving motivational climate, which both the teammates and the coaches create. The result is also similar to the studies of Valero-Valenzuela et al. (2023), which stress the positive association between psychological need satisfaction and task-involving motivational climate. PNS has been found as a significant predictor of TC, so as PNT, a negative predictor, and BO, a positive predictor, the null hypothesis claiming that there is no predictor of TC is hereby rejected. The hypothesis, claiming that there is no best-fit model for the study, is also hereby rejected, as a model was generated that satisfied all the parameters for it to be considered a model of parsimony. The limitations of this study can serve as baseline data for future researchers to conduct context-specific and robust future research.

Research Contribution

The conduct of this study provides valuable insights into the psychological factors that influence team climate in a sports context. Anchored in the Self-Determination Theory (Deci & Ryan, 2000), This finding highlights that athletes feel that their need for autonomy, competence, and relatedness is satisfied; they are more likely to perceive their TC positively. Another unexpected finding is that BO has emerged as a positive predictor of TC, suggesting that shared adversity, under different circumstances, enhances the team environment. However, this result needs further investigation, as previous studies reveal that burnout negatively affects well-being and performance among athletes, to provide richer insights and findings about this claim. The "team climate" construct is often overshadowed by a more commonly studied "motivational climate". Though these constructs are related, they are conceptually distinct, thus requiring a more focused study on the team climate construct, deepening our understanding of how a team-based environment is shaped.

Limitation

This study has several research limitations. The cross-sectional nature of this study does not reveal a causal interpretation between the psychological variables and team climate. Secondly, this study utilized self-reported data, which may introduce social desirability bias, especially since athletes respond to questionnaires on their perception concerning the scales, rather than their genuine experiences as athletes. Another limitation of this study is that it limits external validity, as the respondents were competitive athletes facing unique high-pressure environments and may not be able to represent a general athletic population. In addition, the study did not examine moderating variables such as gender and sports played, which may influence how psychological variables affect team climate. Lastly, this study did not consider cultural settings, including team culture and socio-cultural context, which can broaden and enrich our understanding of team climate.

Suggestion

Based on the findings of this study, numerous aspects can be gleaned. Firstly, longitudinal research is needed to capture how the relationships among variables evolve. This can help establish causality and provide insights into how these variables interact as time passes. Objective measures, such as evaluation of peers or observations of athletes' behaviors, should also be incorporated in future studies to enhance the validity of the results. An intervention-based study that is grounded in psychological needs theory is also recommended. This can provide practical guidance for sports professionals in addressing issues with the team climate. Another suggestion is to incorporate moderating variables like gender, age, competition level, and sports type to offer insights into the conditions in which these variables are most influential. Finally, cultural factors should also be considered, as these factors can also shape the perception of team climate.

CONCLUSION

The study affirms that satisfying the psychological needs among athletes is tantamount to fostering TC positively. Athletes who feel supported with their need for autonomy, competence, and relatedness perceive their team environment as supportive. Conversely, when there is an increase in the level of PNT, the level of TC decreases, resulting in disengagement and psychological strain. A particularly interesting result of this study is the positive association of BO in TC, suggesting that

unity and resilience are fostered through shared adversity within the team environment. CCB was revealed as a significant predictor of TC. This is likely because the sample used in this study is competitive athletes. However, this study still reveals the indirect influence of CCB on TC, especially its association with an increase in BO levels. The Structural Equation Model's result underscored that PNS was the most powerful predictor of a health TC, highlighting the essence of an environment that is athlete-centered and autonomy-supportive coaching. Moreover, the model revealed the interrelationship of PNT and CCB, as well as these constructs' direct and indirect effects on BO and their indirect effect on TC. Finally, BO has a minimal effect on TC. This study offers practical implications to sports organizations, especially for coaches. Both well-being and performance are enhanced by cultivating a healthy and positive team climate that meets the psychological needs of athletes, promotes autonomy-supportive coaching, and reduces burnout. Studies in the future should account for moderating factors that may affect the interactions among the variables explored in this study, to consider investigating a more generic and bigger population, and employing longitudinal methods to better understand insights as to how supportive team environments are sustained as time passes. With this, the results of future studies can help mold psychologically safe, high-performing, and socially connected sports environments.

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AUTHOR CONTRIBUTION STATEMENT

Tuano, A.M.S.M. wrote the introduction and discussion of the study. Andacao, A.A. contributed to the method, discussion, and proofreading. Dora, J.D., helped with the statistics and interpretation of the data.

AI DISCLOSURE STATEMENT

The authors used ChatGPT and Grammarly during the preparation of this work to improve the structure and technical aspects of the academic writing. After using the tool/service, the authors thoroughly reviewed and proofread the content and accuracy of the study.

REFERENCES

Bartholomew, K. J., Ntoumanis, N., Ryan, R. M., & Thøgersen-Ntoumani, C. (2011). Psychological need thwarting in the sport context: Assessing the darker side of athletic experience. *Journal of Sport & Exercise Psychology, 33*(1), 75–102. https://doi.org/10.1123/jsep.33.1.75

Bartholomew, K. J., Ntoumanis, N., & Thøgersen-Ntoumani, C. (2010). The controlling interpersonal style in a coaching context: Development and initial validation of a psychometric scale. *Journal of Sport & Exercise Psychology, 32*(1), 193–216. https://doi.org/10.1123/jsep.32.2.193

Beattie, M. A., & Turner, B. A. (2022). The impact of athlete-coach fit on the athletic satisfaction of NCAA Division II college athletes. *Journal for the Study of Sports and Athletes in Education*, *19*(1), 1025-1035. https://doi.org/10.1080/19357397.2022.2084324

Bhavsar, N., Bartholomew, K. J., Quested, E., Gucciardi, D. F., Thøgersen-Ntoumani, C., Reeve, J., Sarrazin, P., & Ntoumanis, N. (2020). Measuring psychological need states in sport: Theoretical considerations and a new measure. *Psychology of Sport and Exercise, 47*(1), 101617. https://doi.org/10.1016/j.psychsport.2019.101617

Choi, H., Jeong, Y., & Kim, S. (2020). The Relationship between coaching behavior and athlete burnout: Mediating effects of communication and the coach–athlete relationship. *International Journal of Environmental Research and Public Health*, *17*(22), 1-17. https://doi.org/10.3390/ijerph17228618

Cho, S., Choi, H., & Kim, Y. (2019). The relationship between perceived coaching behaviors, competitive trait anxiety, and athlete burnout: A cross-sectional study. *International Journal of Environmental Research and Public Health*, *16*(8), 1424. https://doi.org/10.3390/ijerph16081424

Davis, L., Stenling, A., Gustafsson, H., Appleby, R., & Davis, P. (2019). Reducing the risk of athlete burnout: Psychosocial, socio-cultural, and individual considerations for coaches. *International*

Journal of Sports Science & Coaching, 14(4), 444–452. https://doi.org/10.1177/1747954119861076

Duhaylungsod, C. J., Icalina, K., & Longakit, J. C. (2025). Effects of perceived coach leadership on athlete's burnout: Implications for coach-athlete relationship quality. *Journal of Coaching and Sports Science*, *4*(1), 23–33. https://doi.org/10.58524/jcss.v4i1.405

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01

Dišlere, B. E., Mārtinsone, K., & Koļesņikova, J. (2025). A scoping review of longitudinal studies of athlete burnout. *Frontiers in Psychology*, *16*(1), 1-21. https://doi.org/10.3389/fpsyg.2025.1502174

Gunnell, K. E., Crocker, P. R., Wilson, P. M., Mack, D. E., & Zumbo, B. D. (2013). Psychological need satisfaction and thwarting: A test of Basic Psychological Needs Theory in physical activity contexts. *Psychology of Sport and Exercise*, *14*(5), 599–607. https://doi.org/10.1016/j.psychsport.2013.03.007

Habeeb, C. M., Barbee, J., & Raedeke, T. D. (2023). Association of parent, coach, and peer motivational climate with high school athlete burnout and engagement: Comparing mediation and moderation models. *Psychology of Sport and Exercise, 68*(1), 102471. https://doi.org/10.1016/j.psychsport.2023.102471

Hagiwara, G., Tsunokawa, T., Iwatsuki, T., Shimozono, H., & Kawazura, T. (2021). Relationships among student-athletes' identity, mental health, and social support in Japanese student-athletes during the COVID-19 pandemic. *International Journal of Environmental Research and Public Health, 18*(13), 1-12. https://doi.org/10.3390/ijerph18137032

Hair, J. F., Black, B., Babin, B., Anderson, R., & Tatham, R. (2006). Multivariate data analysis (6th ed.). Prentice-Hall. ISBN 978-0130329295.

Hodge, K., & Gucciardi, D. F. (2015). Antisocial and prosocial behavior in sport: The role of motivational climate, basic psychological needs, and moral disengagement. *Journal of Sport and Exercise Psychology, 37*(3), 257–273. https://doi.org/10.1123/jsep.2014-0225

Iacobucci, D. (2010). Structural equations modeling: Fit indices, sample size, and advanced topics. *Journal of Consumer Psychology*, *20*(1), 90-98. https://doi.org/10.1016/j.jcps.2009.09.003

Isoard-Gautheur, S., Martinent, G., Guillet-Descas, E., Trouilloud, D., Cece, V., & Mette, A. (2017). Development and evaluation of the psychometric properties of a new measure of athlete burnout: The Athlete Burnout Scale. *International Journal of Stress Management*, *25*(1), 108–123. https://doi.org/10.1037/str0000083

Leduc, J. G., Boucher, F., Marques, D. L., & Brunelle, E. (2024). Basic psychological need satisfaction of collegiate athletes: The unique and interactive effects of team identification and LMX quality. *Frontiers in Sports and Active Living, 6*(1), 1-12. https://doi.org/10.3389/fspor.2024.1342995

Li, J., Gao, H., Liu, P., & Zhong, C. (2020). Does distance produce beauty? The influence of COVID-19 lockdown on the coach-athlete relationship in a Chinese football school. *Frontiers in Psychology, 11*(1), 560–638. https://doi.org/10.3389/fpsyg.2020.560638

Morales-Sánchez, V., Crespillo-Jurado, M., Jiménez-López, D., Morillo-Baro, J. P., Hernández-Mendo, A., & Reigal, R. E. (2020). Relationships between controlling interpersonal coaching style, basic psychological need thwarting, and burnout, in adolescent soccer players. *International Journal of Environmental Research and Public Health*, *17*(13), 1-13. https://doi.org/10.3390/ijerph17134909

Mossman, L. H., Slemp, G. R., Lewis, K. J., Colla, R. H., & O'Halloran, P. (2022). Autonomy support in sport and exercise settings: A systematic review and meta-analysis. *International Review of Sport and Exercise Psychology, 17*(1), 540–563. https://doi.org/10.1080/1750984X.2022.2031252

Pulido, J., van Puyenbroeck, S., López-Gajardo, M., Vande Broek, G., & Leo, F. M. (2023). Is coaches' perceived team performance associated with their intentions to persist in coaching? The mediating role of coaches' psychological needs and motivation. *Journal of Sports Sciences, 41*(3), 280–290. https://doi.org/10.1080/02640414.2023.2208949

Quested, E., Kritz, M., Hancox, J., Ntoumanis, N., & Thøgersen-Ntoumani, C. (2021). Promoting self-determined motivation for physical activity: From theory to intervention work. In *Society for*

Transparency, Openness, and Replication in Kinesiology eBooks (pp. 37–61). https://doi.org/10.51224/b1003

Reardon, C. L., Hainline, B., Aron, C. M., Baron, D., Baum, A. L., Bindra, A., & Derevensky, J. L. (2019). Mental health in elite athletes: International Olympic Committee consensus statement (2019). *British Journal of Sports Medicine, 53*(11), 667–699. https://doi.org/10.1136/bjsports-2019-100715

Robazza, C., Vitali, F., Bortoli, L., & Ruiz, M. C. (2025b). Basic psychological needs satisfaction, coping functions, and emotional experiences in competitive athletes: A multi-states theory perspective. *Scientific Reports*, *15*(1), 1-11. https://doi.org/10.1038/s41598-025-86072-1

Setiawan, N. A., Kinanti, R., & Nanda, F. A. (2023). Performance motivation of taekwondo athletes: Coach-athlete relationship. *Journal of Coaching and Sports Science*, *2*(1), 38–45. https://doi.org/10.58524/jcss.v2i1.226

Shannon, S., Hanna, D., Leavey, G., Haughey, T., Neill, D., & Breslin, G. (2020). The association between mindfulness and mental health outcomes in athletes: testing the mediating role of autonomy satisfaction as a core psychological need. *International Journal of Sport and Exercise Psychology*, *23*(4), 485-502. https://doi.org/10.1080/1612197X.2020.1717578

Therrien, S. J. W. (2009). *Team climate, cohesion, and athlete satisfaction: Development of the Team Climate Questionnaire for Sport*. Library and Archives Canada, Published Heritage Branch.

Toyama, N., Matsumoto, H., Shibukura, T., & Kono, K. (2020). Perceived controlling coach behaviors and female college athletes' motivation. *Japanese Journal of Sport Psychology, 47*(2), 71–85. https://doi.org/10.4146/jjspopsy.2019-1905

Trbojević, J., & Petrović, J. (2020). Satisfaction of basic psychological needs of young Serbian female athletes: The role of coach and teammates. *Exercise and Quality of Life, 12*(1), 37–45. https://doi.org/10.31382/eqol.200605

Turgeon, S., Martin, L., Rathwell, S., & Camiré, M. (2022). The influence of gender on the relationship between the basic psychological needs and mental health in high school student-athletes. *International Journal of Sport and Exercise Psychology, 22*(3), 721–738. https://doi.org/10.1080/1612197X.2022.2161103

Urien, B., Rico, R., Demerouti, E., & Bakker, A. B. (2021). An emergence model of team burnout. *Journal of Work and Organizational Psychology*, *37*(3), 175–186. https://doi.org/10.5093/jwop2021a17

Valero-Valenzuela, A., Gómez-López, M., González-Hernández, J., & Manzano-Sánchez, D. (2024). Motivational climate, satisfaction of basic psychological needs and fear of failure in young athletes. Differences and Consistencies in Team Sports. *Studia Psychologica*, *66*(3), 223–236. https://doi.org/10.31577/sp.2024.03.902

Van, P. S., Hermans, F., Boen, F., Fransen, K., & Broek, G. V. (2024). The relation between perceived need-supportive coaching behaviours, winning games, and team resilience: a longitudinal examination among basketball and soccer teams. *International Journal of Sport and Exercise Psychology*, 1–22. https://doi.org/10.1080/1612197x.2024.2366421

Vansteenkiste, M., Soenens, B., & Ryan, R. M. (2023). Basic psychological needs theory: A conceptual and empirical review of key criteria. In R. M. Ryan (Ed.), *The Oxford handbook of self-determination theory* (pp. 84–123). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780197600047.013.5

Won, S. (2021). The relationship among psychosocial climate and burnout of middle school Taekwondo athletes. *The World Society of Taekwondo Culture, 12*(4), 31–46. https://doi.org/10.18789/jwstc.2021.33.31

Woods, S., Dunne, S., Gallagher, P., & McNicholl, A. (2022). A systematic review of the factors associated with athlete burnout in team sports. *International Review of Sport and Exercise Psychology*, *18*(1), 70-110. https://doi.org/10.1080/1750984x.2022.2148225