

Interaction Between Sub-Scales of Perceived Parental Expectations and Multi-Dimensional Constructs of Sports Anxiety Experienced by Adolescent Athletes

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Abstract

Background: Academic, competitive, and social demands experienced by adolescent athletes influence their well-being and mental health. Perceived parental expectation is long been recognized as a primary psychological factor, but studies on how distinct factors of perceived parental expectation predict multi-dimensional constructs of sports anxiety are limited. This study assesses the collective and individual effects of four sub-scales of perceived parental expectations: Personal Expectations, Academic Expectations, Career Expectations, and Parental Ambition on three distinct constructs of sports anxiety – Somatic Anxiety, Concentration Disruption, and Worry in adolescent athletes.

Materials and Methods: A cross-sectional correlational research design was employed with 30 adolescent athletes from LNIPE-NERC, Guwahati, India, selected using systematic random sampling. Perceived parental expectations were assessed using the Perception of Parental Expectation Inventory (PPEI), while different dimensions of sports anxiety were assessed using the Sports Anxiety Scale – 2 (SAS-2). Descriptive Statistics, the Shapiro-Wilk Test, and Linear Regression were performed using IBM SPSS software at the 0.05 significance level.

Results: Participants reported a moderate level of Parental Ambition and Personal Expectation, while Academic Expectation and Career Expectation were comparatively higher. Somatic Anxiety and Worry were observed at moderate levels, while Concentration Disruption showed the highest mean score among anxiety dimensions. The combined regression model revealed that perceived parental expectation sub-scales did not significantly predict Somatic Anxiety ($F = 0.18, p = 0.94$), Concentration Disruption ($F = 1.60, p = 0.20$), and Worry ($F = 2.32, p = 0.08$). Among the individual predictors, Personal Expectation showed a significant negative association with Worry ($B = -0.26, p = 0.01$), whereas Academic Expectation, Career Expectation, and Parental Ambition revealed a non-significant statistical association with different sports anxiety dimension.

Conclusion: Perceived parental expectations demonstrated a limited predictive significance for multi-dimensional sports anxiety experienced by adolescent athletes before or during the sports competition. No statistically significant association of sub-scales of perceived parental expectation and constructs of sports anxiety such as somatic anxiety and concentration disruption was observed, but parents' personal expectations correlated significantly with a lower level of cognitive worry. The results indicate multi-dimensional sports anxiety among adolescent athletes is influenced by various environmental and psychological factors beyond perceived parental expectations.

Introduction

Participation in competitive sports is an important determinant of health development, and this is a key stage for adolescents' psychological development and physical maturation. Competitive sport demands a range of cognitive and psychological abilities, such as self-confidence, resilience, emotional stability, and improved decision-making, along with structured training to ensure the athlete can perform at a highly competitive level (Biddle et al., 2019). Although enhancing physical performance has traditionally been the primary goal of competitive sport, a growing body of literature suggests that athletes' psychological health is important for sustained performance and long-term development. Studies indicate adolescents participating in competitive sports are often exposed to performance expectations, rigorous training regimens, academic pressure, injury-related anxiety and competitive stress, resulting in increased vulnerability to depression, anxiety, psychological distress, and psychological and physical burnout if left unaddressed (Reardon et al., 2019). Smith et al., (2006), Sports anxiety is a sports-specific psychological phenomenon characterized by cognitive uneasiness, psychological arousal, and behavioural responses that arise when athletes perceive competitive situations as threatening to their performance. While an optimum or moderate level of anxiety can increase competitive readiness and attentional focus, excessive or chronic sports anxiety may inhibit concentration, decision-making ability and athletic performance (Grossbard et al., 2009).

The study focuses on adolescent athletes because they are more vulnerable as they undergo rapid physical and psychological development, face heightened competitive expectations, and take on academic responsibilities. Earlier studies revealed that a significant proportion of adolescent athletes experience moderate to high levels of competitive anxiety, with prevalence

differing as per age, gender, type of sports being played, and level of competition being participated in and prior competitive experience (Kaye et al., 2014; Rice et al., 2016). Sports anxiety has been recognized as a multi-dimensional construct consisting of three interrelated dimensions: somatic anxiety, concentration disruption, and worry, all of which affect athletic development through various psychological and physiological pathways (Smith et al., 2006). Somatic anxiety refers to the physical symptoms of anxiety such as increased heart rate, muscle tightening, shaking, and gastrointestinal discomfort which arise in anticipation of or during competition. Worry embodies the cognitive components of anxiety and is marked by ongoing concerns about performance failure, negative evaluation, and the potential repercussions of poor outcomes (Grossbard et al., 2009). Concentration disruption signifies difficulties in sustaining attentional focus on task-relevant cues due to distracting thoughts and increased emotional arousal, thus impairing skill execution, decision-making, and tactical performance in competitive situations (Smith et al., 2006). Neil et al., (2011) argued that these dimensions are theoretically distinct but often interrelated, resulting in a cumulative negative impact on athletes' performance, emotional health and competitive consistency, specifically adolescent athletes who are developing effective coping skills.

Perceived Parental Expectations (PPE) is defined as an individual's own subjective interpretation of the ambition, standards, and performance objectives that parents expect from their offspring. PPE consist of multiple dimensions that influence adolescents' psychological health, motivation, and achievement. Parental Expectations (PE) refer to the aspirations and standards that adolescents perceive their parents hold for them for their success. Academic Expectations (AE) are a reflection of academic excellence and

educational achievements that adolescents perceive that their parents emphasise (Yamamoto & Holloway, 2010). Career expectations include parental hopes for future academic and professional achievements, which impact adolescents' career planning and vocational development (Dietrich & Kracke, 2009). Parental Ambition (PA) characterized by the extent to which parents impose high personal aspirations onto their children, encouraging success while potentially contributing to fear of failure, performance-related stress and perfectionism when these expectations are unrealistic or unattainable (Harwood & Knight, 2015). Collectively, these dimensions explain how adolescents perceive parental influences across academic and athletic contexts.

Objectives of the Study

The study will assess the individual and combined effects of subscales of PPE of adolescent athletes, that is, Parental Expectations, Academic Expectations, Career Expectations, and Parental Ambition, on multi-dimensional aspects of sports anxiety.

Purpose of the Study

The study addresses an important gap in sport psychology by examining the interaction between the different psychological components of PPE and multidimensional sports anxiety among adolescent athletes. Earlier research has studied the independent effect of sub-scales of PPE on adolescents' sports performance (Yamamoto & Holloway, 2010; Harwood & Knight, 2015) and multidimensional constructs of sports anxiety (Smith et al., 2006; Grossbard et al., 2009), along with the prevalence of parents' expectations on athletes' psychological development, motivation, and sporting experience (Knight et al., 2017; Lisinskiene et al., 2019). But limited studies have investigated how distinct PPE jointly influence sports anxiety constructs.

Materials and Methods

Participants & Sampling: The study includes 30 subjects, distributed across four sports discipline: Judo (n = 10), Lawn Tennis (n = 8), Swimming (n = 5), and Cricket (n = 7) aged 16 to 18 years were selected through systematic random sampling from the Lakshmibai National Institute of Physical Education-North East Regional Centre (LNIPE-NERC), Guwahati, India. The institute is a Deemed-to-be University recognized by the University Grants Commission (UGC), providing various Physical Education courses such as B. P. Ed, M. P. Ed, and PhD. Participants must have a minimum of 2 years of training experience and have participated in any national-level tournament once were the inclusion criteria for subjects in the study. 300 students' IDs were selected in the initial screening, which were allotted to them during the time of admission. In the second phase, with each sampling interval calculated as:

$$K = \frac{N}{n} = \frac{300}{30} = 10$$

a random point was chosen between 1 and 10, thereby every 10th student ID was systematically selected until the required sample size of 30 was achieved.

Research Design: The study used a cross-sectional correlational research design. Since the study assesses the extent to which PPE sub-scales, i.e., parental expectations, academic achievement, career achievement, and parental expectation, predict the level of somatic anxiety, concentration disruption, and worry experienced by adolescent athletes, a non-experimental observational design was found to be appropriate. Throughout the study, the data were gathered from subjects at a single point in time through standard questionnaires.

Variables:**Table No. 1:** Classification of Study Variables along with their Measuring Scale

Category	Variable	Sub-Dimensions	Measuring Scale	Role in the Study
Predictive Variable	Perceived Parental Expectation (PPE)	1. Personal Expectation (PE) 2. Academic Expectation (AE) 3. Career Expectation (CA) 4. Parental Ambition (PA)	Continuous (PPEI Score)	Predictor
Outcome Variable	Sports Anxiety	1. Somatic Anxiety (SA) 2. Concentration Disruption (CA) 3. Worry (WO)	Continuous (SAS-2 Score)	Outcome

The study considered the sub-scales of Perceived Parental Expectation: (1) Personal Expectation, (2) Academic Expectation, (3) Career Expectation, (4) Parental Ambition as predictive variable and multidimensional constructs of sports Anxiety as outcome variable: (1) Somatic Anxiety, (2) Concentration Disruption, and (3) Worry to assess how well sub-scales of PPE can predict multi-dimensional sports anxiety of adolescent athletes.

Instruments:

Perceived Parental Expectation: The PPE subscales were measured using the Perception of Parental Expectations Inventory (PPEI), developed by Sasikala & Karunanidhi (2011) at the University of Madras, India. The PPEI measures the perception of parental expectation through Personal Expectation (PE), Academic Expectation (AE), Career Expectation (CE), and Parental Ambition (PA) and the fulfilment of the expectation through a 5-point Likert Scale. The PPEI includes 30 items, divided unevenly into 4 different sub-scales: Personal Expectations (10 items), Academic Expectations (8 items), Career Expectations (5 items), and Parental Ambitions (7 items). PE is measured by Question Nos 2, 12, 13, 15, 16, 18, 19, 23, 26, and 28. The AE is measured by Question Nos 7, 8, 20, 21, 25, 27, 29, and 30. CA is measured by Question Nos 3, 9, 11, 22, and 24. The PA is measured by Question Nos 1, 4, 5, 6, 10, 14, and 17. Scores of each sub-scale are calculated by summing the responses of participants on 5 items. The

PPEI consists of 30 items filled out on a 5-point Likert scale (1 to 5). The minimum and maximum number of scores that can be obtained on PPEI sub-scales are: PE (score range:10-50), AE (score range: 8-40), CE (score range: 5-25), and PA (score range: 7-35). Higher scores on the sub-scales of the PPEI indicate a greater level of parental expectations on their offspring for that particular scale.

Sports Anxiety: The Sports Anxiety Scale-2 (SAS-2) developed by Smith et al., (2006) was used to measure the levels of sub-scales of sports anxiety experienced by adolescent athletes. The SAS-2 is a revised edition of the Sports Anxiety Scale (SAS), which was earlier developed in 1990 (Smith et al., 1990). The scales assess multi-dimensional constructs of sports anxiety experienced by adolescent athletes: (1) Somatic Anxiety (SA), (2) Concentration Disruption (CA), and (3) Worry (WO) before or during competition. The SAS-2 includes 15 items, divided equally into three subscales (SA, CA, and WO). SA is measured by Questions Nos. 2, 6, 10, 12, and 14. WO is measured by Questions Nos. 3, 5, 8, 9, and 11. Question Nos. 1, 4, 7, 13, and 15 measure CD. Responses from subjects were measured on a 4-point Likert scale, ranging from 1 to 4. Scores of each sub-scale are calculated by summing the responses of subjects on 5 items. The scores of sub-scales on SAS-2 can range from 5 to 20. Subjects with higher scores on the sub-scales are more likely to possess that particular trait.

Statistical Test: IBM SPSS Version 27 was used for statistical analysis of the data. For describing the nature of the data of subjects for both sub-scales of PPE and the multi-dimensional factor of sports anxiety, mean and standard deviation were used as descriptive statistics. To assess whether the collected data were normally distributed, the Shapiro-Wilk test was used at 0.05 significance. Linear Regression Analysis was used to assess whether the sub-scales of PPE, i.e., Parental Expectation, Academic

Expectation, Career Expectation, and Parental Ambition, significantly predict the extent of Somatic Anxiety, Concentration Disruption, and Worry among adolescent athletes. Analysis of Variance (ANOVA) represents the combined effect of distinct perceived parental expectations (PPE) on multi-dimensional factors of sports anxiety, while regression coefficients assess the individual effect of PPE on sports anxiety. The Linear Regression Analysis was conducted at a 0.05 level of significance.

Results

Table No. 2: Descriptive Statistics & Shapiro-Wilk Test Result of Sub-Scales of Perceived Parental Expectation Experienced by Adolescent Athletes

Descriptives	Mean	Std. Deviation	Decision	Statistics	df	Sig.	Interpretation
PE	32.70	3.59	Moderate	0.956	30	0.24	Accept H_0
AE	26.50	3.48	High	0.960	30	0.31	Accept H_0
CE	16.70	2.52	High	0.962	30	0.35	Accept H_0
PA	20.23	3.25	Moderate	0.987	30	0.96	Accept H_0

The findings in Table 2 indicate that subjects reported a moderate level of PE (32.70 ± 3.59) and PA (20.23 ± 3.25). This shows that adolescent athletes perceived their parents' expectations and parental ambition regarding self-development and personal growth to be balanced and attainable. This shows that parents often encourage their adolescents to develop their abilities and aim for success without applying excessive stress. Supportive PE resulted in enhanced confidence, motivation, and enjoyment in sports (Harwood & Knight, 2015; Knight et al.,

2017). AE (26.50 ± 3.48) and CE (16.70 ± 2.52) were perceived at a higher level. The higher mean score of AE and CE suggests that adolescent athletes believe their parents emphasize educational excellence and career success over sports performance. The findings align with earlier research indicating that parents often perceive academic excellence and career success as significant indicators of long-term success, and they convey these aspirations to their adolescents (Eccles & Harold, 1993; Seginer, 1983).

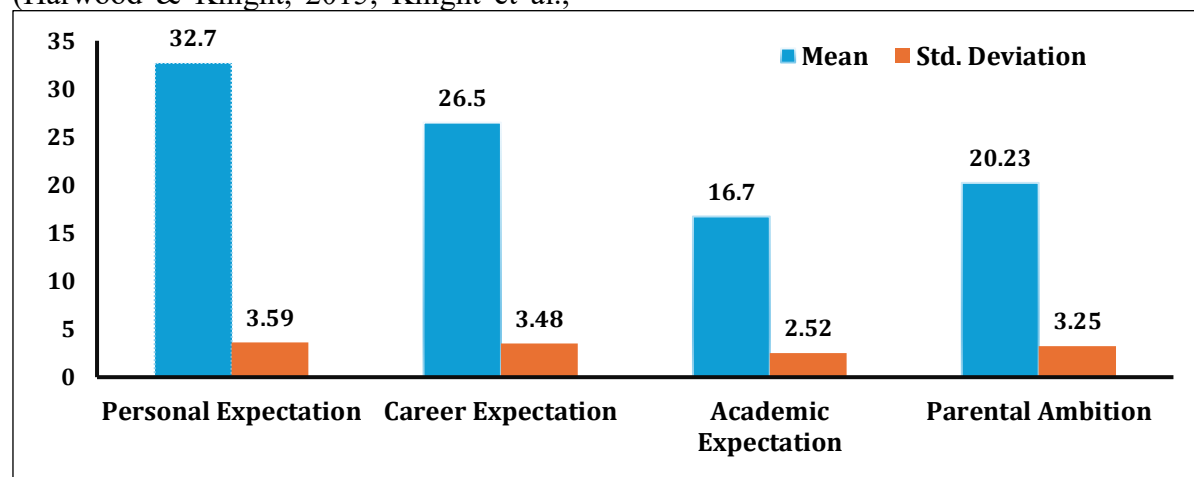
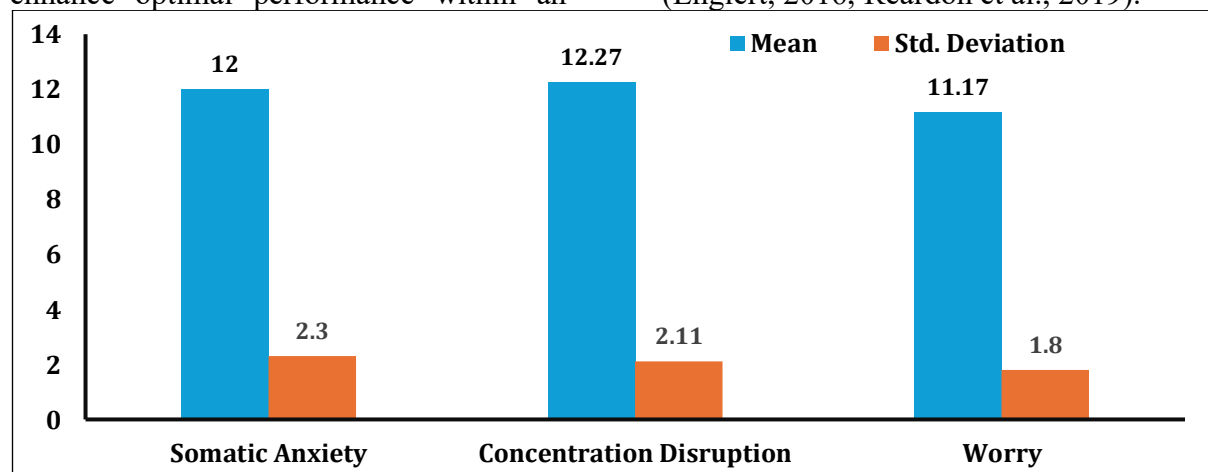


Figure No.1: Graphical Representation of Reported Sub-Scales of PPE Experienced by Adolescent Athletes**Table No. 3:** Descriptive Statistics & Shapiro-Wilk Test Result of Multi-Dimensional Constructs of Sports Anxiety Experienced by Adolescent Athletes

Descriptives	Mean	Std. Deviation	Decision	Statistics	df	Sig.	Interpretation
SA	12.00	2.30	Moderate	0.969	30	0.50	Accept H_0
CD	12.27	2.11	High	0.957	30	0.26	Accept H_0
WO	11.17	1.80	Moderate	0.930	30	0.48	Reject H_0

The findings of Table 3 suggest that adolescent athletes experience a moderate level of SA (12.00 ± 2.30) and WO (11.17 ± 1.80), whereas CD (12.27 ± 2.11) was observed at a higher level. The moderate level of SA and WO indicates that adolescent athletes experience controllable physiological arousal and performance-related concern. These indicators are beneficial in competitive sports and can enhance optimal performance within an

appropriate range (Rice et al., 2016; Woodman & Hardy, 2003). While the higher mean value on CD (12.27 ± 2.11) suggests that adolescent athletes experience greater difficulty in maintaining attention focus before or during the competition. Prior studies suggest that competitive demands and cognitive distractions can inhibit attention focus and decision-making abilities, particularly in adolescent athletes (Englert, 2016; Reardon et al., 2019).

**Figure No. 2:** Graphical Representation of Reported Multi-Dimensional Constructs of Sports Anxiety Experienced by Adolescent Athletes**Regression Result of PPE Sub-Scales Predicting Somatic Anxiety****Table No. 4:** Result of Analysis of Variance (ANOVA) for the Multiple Regression Model on Sub-Scales of PPE on Somatic Anxiety Experienced by Adolescent Athletes

	Sum of Square	df	Mean Square	F-Statistics	Sig. (Two-Tail)
Regression	4.45	4	1.11	0.18	0.943 ^b
Residual	149.54	25	5.98		
Total	154.00	29			

Table 4 presents the ANOVA results assessing the combined effects of PE, CE, AE, and PE on Somatic Anxiety (SA) experienced by adolescent athletes. The result showed an F-value of 0.18 and a p -value of 0.94. Since the obtained sig. value is higher than 0.05, this suggests that the sub-scale of PPE jointly does not explain a meaningful contribution in predicting the SA experienced by athletes before or during the competition.

Table No. 5: Unstandardized Regression Coefficient for the Sub-Scales of PPE on Somatic Anxiety Experienced by Adolescent Athletes

	Unstandardized Coefficient		t-value	Sig. (Two-Tailed)	95% CI, % for Beta Coefficient	
	B	Std. Error			L.B	U.B
PE	0.07	0.14	0.12	0.60	-0.22	0.38
AE	0.04	0.14	0.70	0.74	-0.24	0.33
CE	-0.11	0.18	-0.12	0.52	-0.48	0.25
PA	-0.00	0.15	-0.00	0.98	-0.31	0.31

The result in Table 5 indicates that perceived PE ($B = 0.078$, $p = 0.60$) and AE ($B = 0.046$, $p = 0.74$) of parents exhibited a non-significant positive association with somatic anxiety (SA) experienced by adolescent athletes, suggesting an increase in perceived academic and personal expectations of parents is associated with a moderate increase in SA. While CE ($B = -0.116$, $p = 0.52$) and PA ($B = -0.003$, $p =$

0.98) demonstrated a negative association, suggesting an increase in perceived CE and PA results in a marginal decrease in SA of adolescent athletes before or during the competition. None of these associations was found to be statistically significant ($p > 0.05$), and all the predicting variables had 95% CI includes zero, highlighting that observed positive and negative relations were weak.

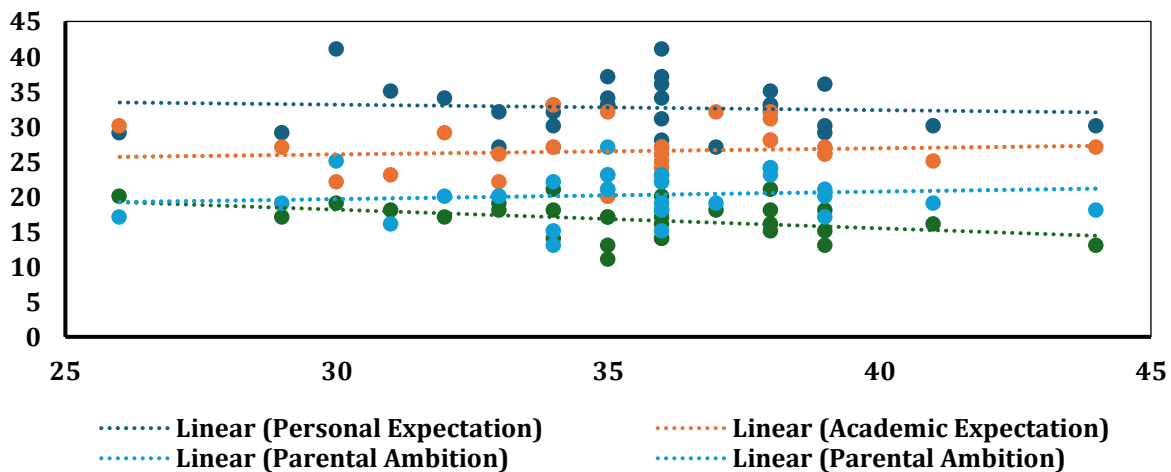


Figure No. 3: Linear Scatter Plot Illustrating the Extent of Sub-Scales of PPE in Predicting Somatic Anxiety Experienced by Adolescent Athletes Before or During the Competition.

Table No. 6: Model Summary of Regression Analysis of Distinct PPE Sub-Scales on Somatic Anxiety

R	R ²	Adjusted R ²	Std. Error of the Estimates
0.170 ^a	0.029	-0.126	2.446

The model shown in Table 6 indicated a multiple correlation coefficient (R) of 0.17, indicating a very weak positive relation between the predicting variable and SA. The R² value of 0.029 suggests that the PPE sub-scales collectively explained only 2.9% of the variance in SA, while the remaining 97.1% of the variance is attributed to other factors which are not included in the model. Additionally, the adjusted R² value of -0.126 suggests that the regression model does not provide meaningful improvement in predicting somatic anxiety beyond what would be expected by chance.

Regression Result of PPE Sub-Scales Predicting Concentration Disruption

Table No. 7: Result of ANOVA for the Multiple Regression Model on Sub-Scales of PPE on Concentration Disruption by Adolescent Athletes

	Sum of Square	df	Mean Square	F-Statistics	Sig. (Two-Tail)
Regression	26.55	4	6.63	1.60	0.204 ^b
Residual	103.31	25	4.13		
Total	129.86	29			

Based on the results of ANOVA in Table 7, computed to assess the combined contribution of PE, AE, CE, and PA in predicting concentration disruption. The analysis yielded an F-value of 1.60 with a *p*-value of 0.20. As the *p*-value of 0.20 is

greater than the significance level of 0.05, this indicates that the sub-scale factors of PPE do not jointly have a significant effect on the level of concentration disruption experienced by adolescent athletes during or before the competition.

Table No. 8: Unstandardized Regression Coefficient for the Sub-Scales of PPE on Concentration Disruption Experienced by Adolescent Athletes

	Unstandardized Coefficient		t-value	Sig. (Two-Tailed)	95% CI, % for Beta Coefficient	
	B	Std. Error			L.B	U.B
PE	0.06	-0.12	0.56	0.58	-0.18	0.32
AE	-0.03	0.11	-0.32	0.74	-0.28	0.20
CE	-0.33	0.15	-2.19	0.37	-0.64	-0.02
PA	0.10	0.12	0.78	0.43	-0.16	0.36

Table 8 presents the unstandardized regression coefficient assessing the individual effect of subscales of PPE in predicting the level of concentration disruption experienced by adolescent athletes before or during the competition. The results suggest that PE demonstrates a very weak positive ($B = 0.06$, $p = 0.58$); simultaneously, PA ($B = 0.10$, $p = 0.43$) demonstrates a moderate positive association in predicting concentration disruption (CD) among adolescent athletes. While AE ($B = -0.03$, $p = 0.74$) and CE ($B = -0.33$, $p = 0.37$) both showed a negative

association with CD. These findings suggest that an increase in perceived personal expectation and parental ambition results in increased concentration disruption for athletes, lowering their mental focus, self-esteem, and confidence, etc., while an increase in perceived academic expectation and career expectation results in a lower level of concentration disruption experienced by the athletes and vice versa. None of the observed associations shown in Table 8 is statistically significant, with a *p*-value for all the sub-scales of PPE greater than the 0.05 level of significance.

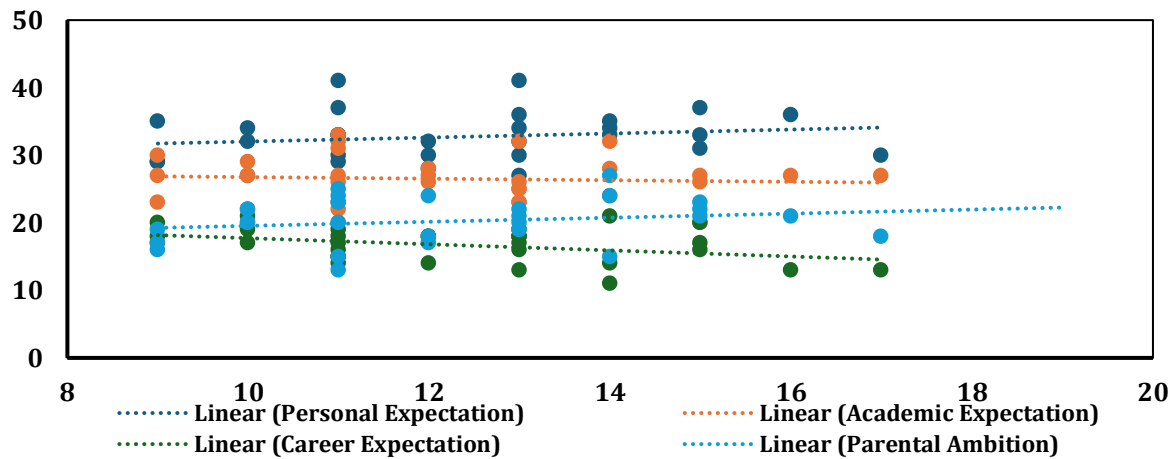


Figure No. 2: Linear Scatter Plot Illustrating the Extent of Sub-Scales of PPE in Predicting Concentration Disruption Experienced by Adolescent Athletes Before or During the Competition.

Table No. 9: Model Summary of Regression Analysis of Distinct PPE Sub-Scales on Concentration Disruption

R	R ²	Adjusted R ²	Std. Error of the Estimates
0.452 ^a	0.204	0.077	2.033

Table 9 presents the model summary of the regression analysis assessing the distinct sub-scales of PPE on concentration disruption among adolescent athletes. The model produced a moderate positive relation ($R = 0.452$). The R^2 value of 0.204 indicates the four different sub-scales of

PPE explain only 20.4% of the variance of concentration disruption experienced by athletes before or during competition, while the remaining 79.6% is still unknown. The adjusted R^2 of 0.077 demonstrates a moderate explanatory power after adjusting the predictors included in the model.

Regression Result of PPE Sub-Scales Predicting Worry.

Table No. 10: Result of ANOVA for the Multiple Regression Model on Sub-Scales of PPE on Worry Among Adolescent Athletes

	Sum of Square	df	Mean Square	F-Statistics	Sig. (Two-Tail)
Regression	25.56	4	6.39	2.32	0.08 ^b
Residual	68.60	25	2.74		
Total	94.16	29			

Based on the results in Table 10, the ANOVA test yielded an F -value of 2.32 along with $p = 0.08$. Since the obtained p -value is higher than the 0.05 significance level, this indicates that the Sub-scales of PPE, i.e., PE, AE, CE, and PA, jointly do not have a significant effect on the level of worry experienced by adolescent athletes before or during the competition.

Table No. 11: Unstandardized Regression Coefficient for the Sub-Scales of PPE on Worry Among Adolescent Athletes

	Unstandardized Coefficient		t-value	Sig. (Two-Tailed)	95% CI, % for Beta Coefficient	
	B	Std. Error			L.B	U.B
PE	-0.26	0.10	-2.61	0.01	-0.47	-0.05
AE	0.01	0.09	0.12	0.90	-0.18	0.20
CE	0.09	0.12	-0.79	0.43	-0.35	0.15
PA	0.09	0.10	0.16	0.38	-0.12	0.30

Table 8: Assess the individual influence of sub-scale of PPE in predicting the level of worry experienced by adolescent athletes. Perceived Academic Expectation ($B = 0.01, p = 0.90$), had a weak non-significant positive association with worry experience by adolescent athletes while perceived Career Expectation ($B = 0.09, p = 0.43$) and Parental Ambition ($B = 0.09, p = 0.38$) both have similar positive association with worry demonstrating an increase in AE, CE, and PA will increase the level of worry experienced among athletes but the p value

of these three sub-scales is more than 5% significance suggesting that this Sub-scales does no significantly predict the extent of worry experienced by athletes. Conversely, Parents' Personal Expectation (PE) ($B = -0.26, p = 0.01$) showed a significant negative association with worry, indicating that an increase in perceived parents' personal expectation decreases the feeling of worry among adolescent athletes and vice versa, with a statistically significant p value.

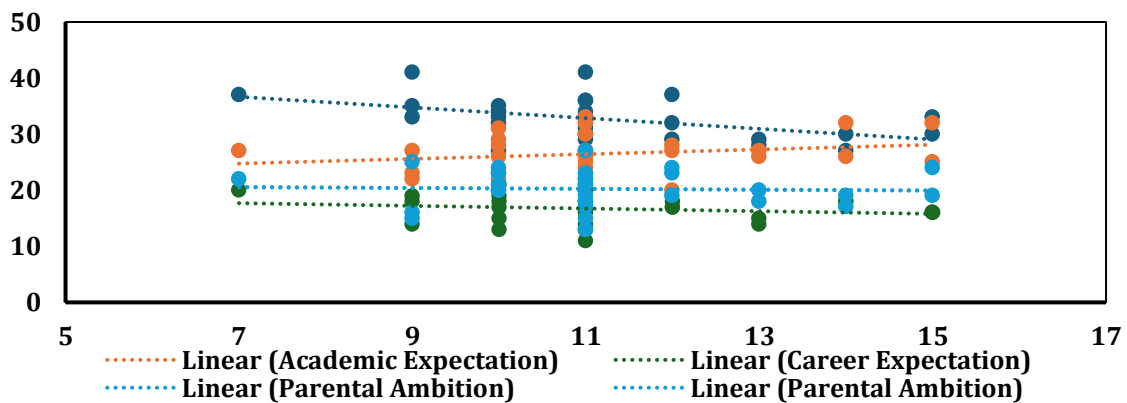


Figure No. 3: Linear Scatter Plot Illustrating the Extent of Sub-Scales of PPE in Predicting Worry Among Adolescent Athletes Before or During the Competition.

Table No. 12: Model Summary of Regression Analysis of Distinct PPE Sub-Scales on Worry

R	R ²	Adjusted R ²	Std. Error of the Estimates
0.521 ^a	0.271	0.155	1.657

The model summary of the regression analysis is shown in Table 12, assessing the influence of the distinct sub-scales of PPE on Worry among adolescent athletes. The model yielded a moderate positive correlation ($R = 0.52$). The R^2 value of 0.271 indicates that the PPE sub-scales collectively explained 27.1% of the variance in worry among athletes, while the remaining 72.9% is still unexplained. The adjusted R^2 value of 0.155 suggests that, after accounting for the number of predictors, the model explained 15.5% of the variance in worry.

Discussion

The present study assesses the relationship between sub-scales of perceived parental expectation and distinct dimensions of sports anxiety in adolescent athletes. The

findings provided comprehensive insights into how adolescent athletes perceived parental expectations and how these perceptions relate to their psychological behaviour during or before the competition. The descriptive statistics revealed that adolescent athletes perceived a moderate level of parental personal expectation and parental ambition, while the academic expectation and career expectation were perceived at a higher level. Although parents encourage their children to develop personal competencies, greater emphasis is placed on educational achievement and future career success than on athletic performance (Tessitore et al., 2021). These results are understandable within the Indian culture, where education is the primary pathway to life success and socio-economic mobility (Kishan & Rajverma, 2024;

Kencharlli, 2026). Consequently, Indian parents encourage their children to balance sports participation along with academic excellence rather than sports as an individual career path.

The findings of the study support previous research by Yamamoto & Holloway, (2010), who argued that parental expectations significantly influence adolescent achievement behavior and educational aspiration. Similarly, Eccles & Harold, (1993), along with Seginer, (1983), concluded that parents continuously emphasize academic excellence because they perceive educational attainment as a primary need for future occupational stability. Constructive parental involvement supports athletes' confidence and psychological development, while unattainable expectations can undermine well-being (Kramers et al., 2023). Supportive parental expectations can also influence motivation and persistence in adolescent sports when they remain realistic and accompanied by emotional support rather than excessive parental pressure. Additionally, the descriptive statistics further revealed that adolescent athletes experience a moderate level of somatic anxiety and worry but a relatively higher level of concentration disruption. Moderate somatic anxiety indicates that athletes experienced optimal physiological arousal, characterized by increased heart rate, psychological preparedness, blood pressure, and other endocrinological variables, before or during competition, without reaching levels that would significantly impair performance (Chawla et al., 2025; Zhang & Zhao, 2025). Smith et al., (2006) concluded that moderate physiological arousal often correlates with increased competitive preparedness because it enhances alertness and motivational intensity. The notably higher concentration disruption observed among adolescent athletes requires particular attention. Adolescents are an age group marked by rapid psychological development, intensified performance

expectations and increased academic responsibilities, resulting in athletes being more susceptible to decreased attention focus or concentration disruption in competitive situations. Prior study of Didur et al., (2026) suggests that increased cognitive demands diminish attention control and disrupt decision-making in highly competitive situations. Englert, (2016) further explained that maintaining attentional control in competitive sports necessitates significant self-regulation, which may be diminished when athletes simultaneously experience academic pressure, social obligations and competitive challenges. As a result, adolescent athletes may experience concentration disruption while somatic anxiety and cognitive worry remain at a moderate level.

The regression analyses examining the relationship between PPE sub-scales and somatic anxiety demonstrate that the overall regression model is not statistically significant ($F = 0.18$, $p = 0.94$). Furthermore, the four predictor variables collectively explained only 2.9% of the variance in somatic anxiety, indicating extremely limited predictive ability. Somatic Anxiety is caused by situational and sports-specific factors, rather than parental perceptions (Zhang et al., 2026). Athletes' competitive experience, self-confidence, perceived competence, coaching behavior, injury concern and the significance of the competition itself have all been found to have an impact on physiological symptoms they experience before competition (Smith et al., 2006; Grossbard et al., 2009). The individual regression coefficients further supported the findings, while career expectations and parental ambition demonstrated a weak negative association with somatic anxiety; personal expectations and academic expectations correlate positively; however, none of these associations achieved statistical significance. These results suggest that adolescent athletes might not always perceive parental expectations as threatening enough to cause measurable

physiological changes to arise while experiencing somatic anxiety before the competition.

Despite accounting for 20.4% of the variation, the regression analysis showed that the combined influence of the four sub-scales of perceived parental expectations did not significantly predict concentration disruption among adolescent athletes. Moreover, Academic and Career Expectations revealed a weak negative association, while personal expectations and parental ambition showed a weak positive relationship. None of the observed predictors showed a statistically significant association. These findings support that multiple psychological and environmental factors such as competitive stress, emotional regulation, self-confidence, coaching behaviour, and sports-specific experience might influence concentration disruption beyond parental expectations (Rajpoot et al., 2026; Zhao et al., 2026). The direction of the observed relationship provides useful insights, even though it was not statistically significant. Higher perceived parental standards may marginally increase cognitive interference and self-consciousness during competition, as indicated by the weak positive association between personal expectation and parental ambition with concentration disruption. The negative correlation between academic and personal expectations, on the other hand, would indicate that structured parental guidance promotes better attentional control and self-discipline. As per studies, adolescent athletes' psychological functioning is influenced by parental involvement rather than parental expectations alone (Harwood et al., 2019). While controlling or pressuring parental behaviour is more likely to decrease concentration disruption during competition, supportive parenting characterized by emotional encouragement and autonomous support improves resilience and concentration (Kramers et al., 2023). The regression model for worry revealed that parents' personal expectations

were the only significant predictor of worry among adolescent athletes, demonstrating a significant negative relation ($B = -0.26, p = 0.01$) as compared to academic expectations, career expectations and parental ambition. The negative relation of -0.26 indicates that higher perceived parental expectations are associated with a lower level of cognitive worry experience among adolescent athletes before or during the competition. As per studies, parental expectations that are supportive, realistic, attainable and focused on their children's personal growth help adolescents feel more confident and provide psychological security, thereby reducing worry during competitive participation (Harwood & Knight, 2015). Conversely, worry was not significantly predicted by academic expectations, career expectations and parental ambition, suggesting that these factors of PPE do not affect cognitive anxiety individually.

Conclusions

The study demonstrates that the multi-dimensional constructs of sports anxiety among adolescent athletes have limited influence by perceived parental expectations. Participants showed a moderate level of personal expectations and parental ambition, and a comparatively higher level of academic and career expectations. However, these sub-scales of perceived parental expectations did not statistically predict the extent of somatic anxiety and concentration disruption experienced by adolescent athletes before or during the competition. Likewise, the combined influences on worry remain statistically non-significant. But personal expectations of parents were the only significant individual predictor of worry among participants, with a negative association suggesting supportive and attainable parental expectations may reduce athletes' cognitive concern and worry before competition. These findings suggest that in addition to perceived parental expectations, a broader range of

psychological, environmental, and sports-specific factors influence sports anxiety.

Informed Consent

Informed consent from participants were taken before data collection. All the participants willingly participated in the study.

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Conflicts of Interest

All the authors declare that there is no conflict of interest.

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