The Effect of Achievement Motivation and Perfectionism on Test Anxiety: Evidence from Purulia District Adolescents

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ABSTRACT

Test anxiety remains a pervasive psychological concern that adversely affects adolescents' academic performance and emotional well-being. This study investigates the combined effects of achievement motivation and perfectionism on test anxiety among school-going adolescents in Purulia district, West Bengal. Using a correlational research design, a stratified random sample of 516 students from classes IX and X was assessed through the Achievement Motivation Scale **(Deo & Mohan, 1985),** the Perfectionist Self-Presentation Scale **(Hewitt et al., 2003),** and the Friedben Test Anxiety Scale **(Friedben & Benadas-Jacob, 1997).** Stepwise multiple regression analyses were conducted separately for male, female, and combined groups of adolescents. Findings revealed that both maladaptive dimensions of perfectionism (e.g., non-display of imperfection, perfectionistic self-promotion) and certain facets of achievement motivation (e.g., achievement anxiety) significantly predicted higher levels of test anxiety, with variations across gender. The results underscore the intricate interplay between motivational and personality factors in shaping adolescents' evaluative stress. These findings hold practical implications for educators, parents, and policymakers to design interventions that foster adaptive motivation while mitigating the maladaptive aspects of perfectionism, thereby promoting academic resilience.

Keywords: Test Anxiety, Achievement Motivation, Perfectionism, Adolescents, Purulia District

INTRODUCTION

Test anxiety is a pervasive psychological phenomenon that significantly affects the academic performance and emotional well-being of students across various educational settings. It has been conceptualised as a situation-specific trait characterised by worry, tension, and physiological arousal in evaluative contexts **(Spielberger, 1980; Zeidner, 1998).** Among adolescents, particularly those in school, test anxiety often becomes a critical barrier to optimal academic achievement and can negatively impact self-concept and mental health.

Two important psychological factors closely associated with test anxiety are **achievement motivation** and **perfectionism**. Achievement motivation refers to the internal drive that compels individuals to strive for success, overcome challenges, and attain excellence **(Elliot & Church, 1997)**. Students with high achievement motivation tend to perceive examinations as opportunities for growth; however, when such motivation is coupled with external pressures, it can also heighten anxiety levels.

Perfectionism, on the other hand, has been identified as a multidimensional construct encompassing both adaptive and maladaptive aspects **(Hewitt & Flett, 1991; Frost et al., 1990)**. While adaptive perfectionism can foster diligence and persistence, maladaptive perfectionism often leads to excessive worry about mistakes, fear of negative evaluation, and heightened vulnerability to test anxiety. Research evidence suggests that

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perfectionistic tendencies amplify the stress experienced during evaluative situations, thereby exacerbating test anxiety **(Hewitt, Flett, & Ediger, 1996).**

Adolescence, as a transitional stage of development, is particularly sensitive to these psychological dynamics. The school environment, coupled with parental and societal expectations, intensifies the interplay between achievement motivation, perfectionism, and test anxiety **(Putwain & Symes, 2011).** Understanding this relationship in the context of the **Purulia district** is crucial, as socio-cultural and educational factors may uniquely influence adolescents' experiences of academic stress.

Therefore, this study aims to investigate the effect of achievement motivation and perfectionism on test anxiety among school-going adolescents of Purulia district. The findings are expected to contribute to the growing body of literature on adolescent psychology and provide practical insights for educators, parents, and policymakers to design effective intervention strategies that reduce test anxiety and promote academic resilience.

Rationale of the Study

Adolescence is a critical stage of human development characterised by rapid physical, emotional, and cognitive changes. During this period, academic achievement becomes a central concern for students, parents, and educators alike. However, the increasing academic demands and evaluative pressures often lead to heightened levels of **test anxiety**, which adversely impact not only students' performance but also their psychological well-being **(Zeidner, 1998; Spielberger, 1980).**

A large body of research has shown that test anxiety is influenced by both **motivational** and **personality-related factors (Putwain & Symes, 2011). Achievement motivation** plays a significant role in determining how students approach academic challenges—while higher motivation may encourage perseverance and resilience, it may also, under excessive pressure, contribute to increased anxiety **(Elliot & Church, 1997).** On the other hand, **perfectionism** has been widely associated with anxiety and stress in academic settings **(Hewitt & Flett, 1991; Frost et al., 1990).** While adaptive perfectionism may promote diligence, maladaptive perfectionism often results in fear of failure, negative self-evaluation, and heightened susceptibility to test anxiety **(Hewitt, Flett, & Ediger, 1996).**

In the Indian context, where academic success is often equated with future security and social recognition, the pressure on adolescents to perform well in examinations is particularly intense. Previous studies have indicated that socio-cultural and regional factors shape students' motivational orientations and perfectionist tendencies **(Deb, Strodl, & Sun, 2015).** However, there is limited empirical research that specifically examines the combined effect of achievement motivation and perfectionism on test anxiety among school-going adolescents in semi-urban and rural regions such as the **Purulia district of West Bengal**.

Therefore, this study is significant as it seeks to bridge this gap by providing insights into how these psychological factors interact in shaping adolescents' academic experiences in Purulia. The findings will not only enrich the literature on test anxiety but will also inform **educators, parents, and policymakers** to develop targeted interventions aimed at reducing academic stress and enhancing resilience among adolescents.

Objective of the Study

The specific objective of the study was—

O_1: To construct a multiple regression equation to predict **test anxiety** with the help of different facets of **achievement motivation** and **perfectionism** of the male and female school-going adolescents, considering them as a whole.

O_2: To construct a multiple regression equation to predict **test anxiety** with the help of Different facets of **achievement motivation** and **perfectionism** among female school-going adolescents.

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O_3: To construct a multiple regression equation to predict **test anxiety** with the help of different facets of **achievement motivation** and **perfectionism** of the male school-going adolescents only.

The **Hypotheses** were—

H_1: There remain statistically significant multiple regression coefficients to frame the equation to predict **test anxiety** with the help of different facets of **achievement motivation** and **perfectionism** of the school-going adolescents (considering **males and females** as a whole).

H_2: There remain statistically significant multiple regression coefficients to frame the equation to predict **test anxiety** with the help of different facets of **achievement motivation** and **perfectionism** of the **female** school-going adolescents.

H_3: There remain statistically significant multiple regression coefficients to frame the equation to predict **test anxiety** with the help of different facets of **achievement motivation** and **perfectionism** of the **male** school-going adolescents.

REVIEW OF THE LITERATURE

Achievement motivation and perfectionism are critical psychological constructs influencing students' emotional responses to academic challenges, particularly test anxiety, which is a widespread concern among adolescents **(Elliot & Murayama, 2008; Stoeber & Rambow, 2007).** Understanding the interplay of these factors within the socio-cultural context of Purulia district can provide valuable insights into adolescent academic well-being and inform interventions for reducing test-related stress **(Putwain & Daly, 2014).**

Test Anxiety and Academic Performance

Test anxiety is one of the most extensively examined constructs in educational psychology, as it exerts a detrimental influence on students' academic achievement, self-concept, and psychological well-being **(Zeidner, 1998). Spielberger (1980)** defined test anxiety as a situation-specific trait characterised by worry and emotionality, while later models emphasised its multidimensional nature, highlighting its adverse effects on working memory, attention regulation, and problem-solving efficiency **(Eysenck, Derakshan, Santos, & Calvo, 2007).** Empirical findings indicate that adolescents with elevated test anxiety frequently underachieve academically despite adequate preparation and knowledge **(Cassady & Johnson, 2002).**

Achievement Motivation and Test Anxiety

Achievement motivation refers to an individual's internal drive to accomplish goals, strive for excellence, and avoid failure **(McClelland, 1961).** Building on earlier theories, **Elliot and Church (1997)** proposed a hierarchical framework distinguishing approach-oriented and avoidance-oriented motives. Research consistently shows that higher achievement motivation enhances academic performance **(Atkinson, 1964),** yet when paired with an intense fear of failure, it can heighten susceptibility to test anxiety (Rana & Mahmood, 2010). In the Indian context, studies underscore that parental expectations, peer comparison, and societal pressures strongly shape adolescents' motivation, often leading to heightened anxiety when aspirations remain unmet **(Deb, Strodl, & Sun, 2015).**

Perfectionism and Test Anxiety

Perfectionism has been recognised as a critical personality factor influencing academic stress and anxiety. **Frost et al. (1990)** identified six dimensions of perfectionism—particularly concern over mistakes and doubts about actions—as strongly associated with anxiety in academic settings. **Hewitt and Flett (1991)** further differentiated self-oriented, socially prescribed, and other-oriented perfectionism, with socially prescribed perfectionism most consistently linked to test anxiety and psychological distress (**Stoeber & Rambow, 2007).** Longitudinal research demonstrates that maladaptive perfectionism significantly increases vulnerability to depression and anxiety across adolescence **(Hewitt, Flett, & Ediger, 1996).**

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Interaction of Achievement Motivation, Perfectionism, and Test Anxiety

Contemporary research emphasises the interaction between motivation and perfectionism in shaping test anxiety. Bong, Hwang, Noh, and Kim (2014) showed that maladaptive perfectionism exacerbates the anxiety experienced by students with high achievement motivation. Similarly, **Damoc (2014)** found that avoidance-oriented motivation, when coupled with perfectionist tendencies, predicts heightened levels of test anxiety. **Putwain and Symes (2011)** highlighted that external stressors such as parental and teacher-induced fear appeals further intensify the combined negative effects of perfectionism and achievement-related pressures.

Indian Context and Research Gap

Indian studies highlight the pervasive nature of academic stress and test anxiety due to the culture of competitive examinations and societal expectations **(Deb, Strodl, & Sun, 2015; Deb, Thomas, & Walsh, 2015).** However, the majority of such research has been conducted in urban or metropolitan settings, with limited focus on semi-urban and rural areas like Purulia district in West Bengal. Given that socio-economic, cultural, and educational conditions significantly influence adolescents' motivation, perfectionist tendencies, and test-related anxiety, region-specific research is crucial. The present study addresses this gap by probing the effects of achievement motivation and perfectionism on test anxiety among school-going adolescents in Purulia.

RESEARCH METHODOLOGY

The present study was carried out through a correlational research design. The details regarding the method of research design, sample, research instrument, procedure of data collection and statistical analysis are reported herewith.

Research Design

The research design adopted in the present study is presented hereunder.

Variables

In the present study following variables were considered.

Independent Variable

The following variables were the independent variables in the present study –

(i) Achievement Motivation

(ii) Perfectionism

Dependent Variable

Test Anxiety was the dependent variable in the present study.

Sample

Sample selection is a crucial component of empirical research as it ensures the representativeness, validity, and generalizability of findings (**Creswell & Creswell, 2018).** In the present study, a multiphasic stratified random sampling technique was employed to select 516 school-going adolescents (aged 14–16 years) from classes IX and X across 12 government-sponsored Bengali medium secondary and higher secondary schools in Purulia District, West Bengal, thereby minimising sampling bias and enhancing reliability **(Best & Kahn, 2016).**

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Tools of Research

The following research tools were used in the present study for data collection. The tools will be selected by applying yardsticks of relevance, appropriateness, reliability, validity and suitability. A brief description of each type of tool is given hereunder.

Achievement Motivation (n-Ach) Scale (Deo & Mohan, 1985)

To assess achievement motivation among prospective teachers, the **Achievement Motivation (n-Ach) Scale** developed by **Deo and Mohan (1985)** was employed. The instrument comprises 50 self-report items and can be administered either individually or in groups without a time limit. For positive items, the assigned weights are 4 for Always, 3 for Frequently, 2 for Sometimes, 1 for Rarely, and 0 for Never. In contrast, negative items are scored with 0 for Always, 1 for Frequently, 2 for Sometimes, 3 for Rarely, and 4 for Never. It has been widely used in the Indian context to measure students' drive for achievement and their orientation toward excellence **(Deo & Mohan, 1985; Mohan & Deo, 2004).**

Perfectionist Self-Presentation Scale (PSPS)

Perfectionist self-presentation refers to the interpersonal expression of perfection and has been linked to various maladaptive psychological outcomes of the 4 perfectionism dimensions **(Hewitt et al., 2003).** This 27-item self-report measure reflects a multidimensional model with three subscales: *Perfectionist Self-Promotion*, *Non-display of Imperfection*, and *Nondisclosure of Imperfection*. The PSPS employs a **Likert-type response format** ranging from **1 (strongly disagree) to 7 (strongly agree)**, where higher scores indicate greater tendencies toward perfectionistic self-presentation. Evidence from both clinical and non-clinical samples demonstrates strong construct validity and reliability of the PSPS, making it a robust tool for examining the role of perfectionist self-presentation in youth psychopathology **(Hewitt, Blasberg, Flett, Besser, Sherry, & Cheng, 2011).**

Friedben Test Anxiety Scale (FTA; Friedben & Benadas-Jacob, 1997)

To evaluate test anxiety among adolescents, the **Friedben Test Anxiety Scale (FTA)** developed by **Friedben and Benadas-Jacob (1997)** was utilised. The scale consists of 23 items grouped into three subscales: *(a) Social Derogation*—concerns about social belittlement or devaluation following test failure; *(b) Cognitive Obstruction*—difficulties with concentration, recall, and problem-solving before or during a test; and *(c) Tenseness*—physiological and emotional discomfort. Each item is rated on a 5-point Likert scale, ranging from 1 (Does not characterise me at all) to 5 (Characterised me perfectly), allowing for a nuanced understanding of an individual's anxiety level in test-taking situations. Cross-validation and generalisation studies support the replicability of its factor structure, while construct validity evidence highlights its effectiveness in capturing the multidimensional nature of test anxiety in adolescents **(Friedben & Benadas-Jacob, 1997).**

RESULTS

Here, the results of the multiple regression analysis are presented in tabular form.

The effect of "Achievement Motivation" and "Perfectionism" on the "Test Anxiety" of school-going adolescents was studied in this research work. So, "Test Anxiety" was considered the dependent variable, whereas the facets of "Achievement Motivation" and "Perfectionism" were considered as independent variables.

Considering female and male school-going adolescents as a whole, again considering female and male school-going adolescents separately, three different analyses were done.

Multiple Regression Analysis in "Stepwise" Method by Considering Test Anxiety as Dependent Variable and Different Dimensions of Achievement Motivation and Perfectionism as Independent Variables (Total School-Going Adolescents Considering Males and Females as a Whole)

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The results of the analysis are presented herewith to test the following hypothesis:

Hypothesis H_1: There remain statistically significant multiple regression coefficients to frame the equation to predict test anxiety with the help of different facets of achievement motivation and perfectionism of the school-going adolescents, considering females and males as a whole.

Table 4.1 (a): Variables Entered in Multiple Regression Analysis Considering Test Anxiety of School-Going Adolescents as Dependent Variable

Model	Variables Entered	Method
1	Non-display of Imperfection	Stepwise (Criteria: Probability-of-F-to-enter <= 0.050)
2	Interpersonal Relations	Stepwise (Criteria: Probability-of-F-to-enter <= 0.050)
3	Perfectionistic Self-Promotion	Stepwise (Criteria: Probability-of-F-to-enter <= 0.050)
4	Achievement Anxiety	Stepwise (Criteria: Probability-of-F-to-enter <= 0.050)
5	Sports	Stepwise (Criteria: Probability-of-F-to-enter <= 0.050)

Table 4.1(a) shows variables entered in multiple regression analysis.

The dependent variable was the **Test Anxiety** of the school-going adolescents.

Independent variables were dimensions of **Achievement Motivation** and Perfectionism of school-going adolescents.

Method of analysis –here, the ***stepwise*** method of analysis was considered.

Table 4.1 (b): Model Summary in Multiple Regression Analysis Considering Test Anxiety of School-Going Adolescents as Dependent Variable

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	Change Statistics				
					R^2 Change	F Change	df_1	df_2	Sig. F Change
5	0.348[e]	0.12	0.11	0.37	0.01	5.45	1	510	0.02
e. Predictors: (Constant), Non-display of Imperfection, Interpersonal Relations, Perfectionistic Self-Promotion, Achievement Anxiety, Sports									

Table 4.1 (c): ANOVA in Multiple Regression Analysis Considering Test Anxiety of School-Going Adolescents as Dependent Variable

Model	Sum of Squares	df	Mean Square	F	Sig.

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5	Regression	9.69	5	1.94	14.09	0.000[f]
	Residual	70.19	510	0.14		
	Total	79.88	515			

a. Dependent Variable: Test Anxiety

f. Predictors: (Constant), Non-display of Imperfection, Interpersonal Relations, Perfectionistic Self-Promotion, Achievement Anxiety, Sports

Table 4.1 (d): Coefficients in Multiple Regression Analysis Considering Test Anxiety of School-Going Adolescents as Dependent Variable

Model		**Unstandardised Coefficients**		**Standardised Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**β**		
5	(Constant)	-0.45	0.07		-6.81	0.00
	Non-display of Imperfection	0.26	0.02	0.29	11.06	0.00
	Interpersonal Relations	0.27	0.02	0.30	12.48	0.00
	Perfectionistic Self-Promotion	0.13	0.02	0.15	7.58	0.00
	Achievement Anxiety	0.14	0.02	0.18	7.84	0.00
	Sports	0.11	0.02	0.13	6.30	0.00

Table 4.1 (d) shows the coefficient of multiple regression analysis. For the Model 5, the linear multiple regression equation was as follows:

Test Anxiety									
		-0.45							
		0.26							
	=	0.27	×	1	Non-display of Imperfection	Interpersonal Relations	Perfectionistic Self-Promotion	Achievement Anxiety	Sports
		0.13							

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		0.14							
		0.11							

Test Anxiety = - 0.45 + 0.26 × Non-display of Imperfection + 0.27 × Interpersonal Relations + 0.13 × Perfectionistic Self-Promotion + 0.14 × Achievement Anxiety + 0.11 × Sports.

Multiple Regression Analysis in "Stepwise" Method by Considering Test Anxiety as Dependent Variable and Different Dimensions of Achievement Motivation and Perfectionism of the Female School-Going Adolescents as Independent Variables

The results of the analysis are presented herewith to test the following hypothesis:

Hypothesis H_2: There remain statistically significant multiple regression coefficients to frame the equation to predict test anxiety with the help of different facets of achievement motivation and perfectionism of the female school-going adolescents.

Table 4.2 (a): Variables Entered in Multiple Regression Analysis Considering Test Anxiety of Female School-Going Adolescents as Dependent Variable

Model	Variables Entered	Method
1	Perfectionistic Self-Promotion	Stepwise (Criteria: Probability-of-F-to-enter <= 0.050)
2	Interpersonal Relations	Stepwise (Criteria: Probability-of-F-to-enter <= 0.050)
3	Non-display of Imperfection	Stepwise (Criteria: Probability-of-F-to-enter <= 0.050)
4	Sports	Stepwise (Criteria: Probability-of-F-to-enter <= 0.050)
5	General Interest	Stepwise (Criteria: Probability-of-F-to-enter <= 0.050)
6	Need for Achievement	Stepwise (Criteria: Probability-of-F-to-enter <= 0.050)
7	Relevance of School to Future Goals	Stepwise (Criteria: Probability-of-F-to-enter <= 0.050)
8	Achievement Anxiety	Stepwise (Criteria: Probability-of-F-to-enter <= 0.050)

Table 4.2(a) shows variables entered in multiple regression analysis.

The dependent variable was the **Test Anxiety** of the school-going adolescents.

Independent variables were dimensions of **Achievement Motivation** and Perfectionism of school-going adolescents.

Method of analysis –here, the ***stepwise*** method of analysis was considered.

Table 4.2 (b): Model Summary in Multiple Regression Analysis Considering Test Anxiety of Female School-Going Adolescents as Dependent Variable

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	Change Statistics				
					R^2 Change	F Change	df_1	df_2	Sig. F Change
8	0.431[h]	0.19	0.16	0.34	0.01	4.20	1	311	0.04

h. Predictors: (Constant), Perfectionistic Self-Promotion, Interpersonal Relations, Non-display of Imperfection, Sports, General Interest, Need for Achievement, Relevance of School to Future Goals, Achievement Anxiety

Table 4.2 (c): ANOVA in Multiple Regression Analysis Considering Test Anxiety of Female School-Going Adolescents as Dependent Variable

Model		Sum of Squares	df	Mean Square	F	Sig.
8	Regression	8.32	8	1.04	8.87	0.000[i]
	Residual	36.45	311	0.12		
	Total	44.77	319			

a. Dependent Variable: Test Anxiety

i. Predictors: (Constant), Perfectionistic Self-Promotion, Interpersonal Relations, Non-display of Imperfection, Sports, General Interest, Need for Achievement, Relevance of School to Future Goals, Achievement Anxiety

Table 4.2 (d): Coefficients in Multiple Regression Analysis Considering Test Anxiety of Female School-Going Adolescents as Dependent Variable

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	B		
8	(Constant)	2.19	0.20		10.74	0.00
	Perfectionistic Self-Promotion	0.12	0.03	0.21	3.83	0.00
	Interpersonal Relations	-0.11	0.03	-0.21	-4.06	0.00
	Non-display of Imperfection	0.11	0.04	0.15	2.70	0.01

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Sports	0.06	0.03	0.12	2.13	0.03
General Interest	-0.06	0.03	-0.13	-2.45	0.01
Need for Achievement	0.07	0.03	0.16	2.70	0.01
Relevance of School to Future Goals	-0.04	0.02	-0.13	-2.51	0.01
Achievement Anxiety	0.03	0.01	0.11	2.05	0.04

Table 4.2 (d) shows the coefficient of multiple regression analysis. For the Model 5, the linear multiple regression equation was as follows:

		2.19										
		0.12										
		-0.11										
Test Anxiety	=	0.11	×	1	Self-Promotion	Relations	Non-display	Sports	General Interest	Achievement	Future Goals	Anxiety
		0.06										
		-0.06										
		0.07										
		-0.04										
		0.03										

Test Anxiety = 2.19 + 0.12 × Perfectionistic Self-Promotion - 0.11 × Interpersonal Relations + 0.11 × Non-display of Imperfection + 0.06 × Sports - 0.06 × General Interest + 0.07 × Need for Achievement + 0.04 × Relevance of School to Future Goals + 0.03 × Achievement Anxiety

Multiple Regression Analysis in "Stepwise" Method by Considering Test Anxiety as Dependent Variable and Different Dimensions of Achievement Motivation and Perfectionism of Male School-Going Adolescents as Independent Variables

The results of the analysis are presented herewith to test the following hypothesis:

Hypothesis H_3: There remain statistically significant multiple regression coefficients to frame the equation to predict test anxiety with the help of different facets of achievement motivation and perfectionism of the male school-going adolescents.

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Table 4.3 (a): Variables Entered in Multiple Regression Analysis Considering Test Anxiety of Male School-Going Adolescents as Dependent Variable

Model	Variables Entered	Method
1	Nondisclosure of Imperfection	Stepwise (Criteria: Probability-of-F-to-enter <= 0.050)
2	Non-display of Imperfection	Stepwise (Criteria: Probability-of-F-to-enter <= 0.050)
3	Interpersonal Relations	Stepwise (Criteria: Probability-of-F-to-enter <= 0.050)
4	Achievement Anxiety	Stepwise (Criteria: Probability-of-F-to-enter <= 0.050)

Table 4.3(a) shows variables entered in multiple regression analysis.

The dependent variable was the **Test Anxiety** of the school-going adolescents.

Independent variables were dimensions of **Achievement Motivation** and Perfectionism of school-going adolescents.

Method of analysis **–**here, the ***stepwise*** method of analysis was considered.

Table 4.3 (b): Model Summary in Multiple Regression Analysis Considering Test Anxiety of Male School-Going Adolescents as Dependent Variable

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	Change Statistics				
					R^2 Change	F Change	df_1	df_2	Sig. F Change
4	0.391[d]	0.15	0.13	0.36	0.03	6.09	1	191	0.01

d. Predictors: (Constant), Nondisclosure of Imperfection, Non-display of Imperfection, Interpersonal Relations, Achievement Anxiety

Table 4.3 (c): ANOVA in Multiple Regression Analysis Considering Test Anxiety of Male School-Going Adolescents as Dependent Variable

Model		Sum of Squares	df	Mean Square	F	Sig.
4	Regression	4.34	4	1.09	8.59	0.000[e]
	Residual	24.13	191	0.13		
	Total	28.47	195			

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a. Dependent Variable: Test Anxiety

e. Predictors: (Constant), Nondisclosure of Imperfection, Non-display of Imperfection, Interpersonal Relations, Achievement Anxiety

Table 4.3 (d): Coefficients in Multiple Regression Analysis Considering Test Anxiety of Male School-Going Adolescents as Dependent Variable

Model		**Unstandardised Coefficients**		**Standardised Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**B**		
4	(Constant)	2.00	0.22		9.21	0.00
	Nondisclosure of Imperfection	0.12	0.04	0.21	3.08	0.00
	Non-display of Imperfection	0.13	0.04	0.21	2.97	0.00
	Interpersonal Relations	-0.09	0.04	-0.17	-2.51	0.01
	Achievement Anxiety	0.04	0.02	0.17	2.47	0.01

Table 4.3 (d) shows the coefficient of multiple regression analysis. For the Model 4, the linear multiple regression equation was as follows:

		2.00						
		0.12						
Test Anxiety	=	0.13	×	1	Nondisclosure of Imperfection	Non-display of Imperfection	Interpersonal Relations	Achievement Anxiety
		-0.09						
		0.04						

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Test Anxiety = 2.00 + 0.12 × Nondisclosure of Imperfection + 0.13 × Non-display of Imperfection – 0.09 × Interpersonal Relations + 0.04 × Achievement Anxiety

Hypothesis-Wise Discussion

Here is a **hypothesis-wise discussion** section based on the results. The discussion is structured under H_1, H_2, and H_3, interpreting the results, linking them to prior studies, and adding proper citations with references.

Hypothesis H_1

The findings supported H_1, as the regression analysis indicated that test anxiety could be significantly predicted by dimensions of both perfectionism and achievement motivation. Specifically, *non-display of imperfection*, *interpersonal relations*, *perfectionistic self-promotion*, *achievement anxiety*, and *sports orientation* emerged as significant predictors. This suggests that maladaptive perfectionistic tendencies (such as hiding flaws) and anxiety tied to achievement contribute substantially to test-related stress. These results resonate with earlier findings that perfectionism, particularly its maladaptive components, is closely linked with heightened test anxiety **(Hewitt & Flett, 1991; Stoeber & Rambow, 2007).** Moreover, the role of achievement anxiety aligns with **Elliot and Church's (1997)** hierarchical model of achievement motivation, which posits that avoidance-oriented motives amplify anxiety in evaluative contexts.

Hypothesis H_2

The results confirmed H_2, showing that test anxiety among female adolescents was predicted by a broader set of variables: *perfectionistic self-promotion*, *interpersonal relations*, *non-display of imperfection*, *sports*, *general interest*, *need for achievement*, *relevance of school to future goals*, and *achievement anxiety*. Interestingly, *interpersonal relations* and *general interest* negatively predicted test anxiety, suggesting that supportive peer relations and intrinsic interest may buffer against stress. These findings are consistent with research demonstrating gendered differences in perfectionism and motivation, where female students often internalise higher academic expectations and are more vulnerable to socially prescribed perfectionism **(Frost et al., 1990; Hewitt, Flett, & Ediger, 1996).** At the same time, positive social connectedness appears to serve as a protective factor, echoing **Putwain and Symes' (2011)** conclusion that supportive classroom climates mitigate the adverse effects of test-related pressures.

Hypothesis H_3

H_3 was also supported. Among male adolescents, *nondisclosure of imperfection*, *non-display of imperfection*, and *achievement anxiety* positively predicted test anxiety, while *interpersonal relations* had a negative effect. These findings indicate that males, too, are affected by perfectionistic tendencies, particularly those associated with concealing flaws. However, interpersonal relationships again acted as a buffer against anxiety, consistent with evidence that peer support enhances emotional resilience among male students **(Rana & Mahmood, 2010).** The results parallel studies highlighting that socially prescribed perfectionism contributes to higher anxiety across genders (**Bong et al., 2014; Damoc, 2014),** but also emphasise that male students may experience unique protective factors through peer bonding.

Overall Discussion

The three hypotheses collectively confirm that achievement motivation and perfectionism significantly shape adolescents' test anxiety, though their predictive roles differ by gender. Perfectionistic tendencies consistently heightened anxiety across groups; however, female students exhibited a more complex interplay of motivational and relational factors, while male students' anxiety was closely tied to concealing imperfection. These findings highlight the importance of gender-sensitive strategies in addressing academic stress and align with Indian evidence that socio-cultural expectations distinctly influence adolescents' motivational orientations and anxiety outcomes **(Deb, Strodl, & Sun, 2015; Stoeber, 2018).**

Although the predictors were statistically significant, the effect sizes were modest, with R^2 values ranging between 0.12 and 0.19. This indicates that perfectionism and achievement motivation, while important,

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explain only a portion of the variance in test anxiety. Standardised beta values ($\beta \approx 0.29–0.30$ for non-display of imperfection and interpersonal relations) indicate moderate influences, whereas factors such as achievement anxiety and sports orientation showed smaller but meaningful contributions. Such findings suggest the need to interpret statistical outcomes cautiously and to emphasise practical significance when designing interventions **(Cohen, 1992; Funder & Ozer, 2019).**

In addition, contextual moderators not included in the study—such as parental pressure, school climate, and socioeconomic disadvantage—are known to amplify academic stress in Indian adolescents **(Deb, Thomas, & Walsh, 2015; Arora & Singh, 2023).** In semi-urban and rural districts like Purulia, economic vulnerability and rigid parental expectations may overshadow individual traits, creating compounded risks for anxiety **(Putwain & Symes, 2011).** Therefore, interventions must move beyond generalised recommendations toward contextually grounded practices, such as life skills and mindfulness programs, peer-support systems, and parental sensitisation workshops **(Kumar, Sharma, & Banerjee, 2022).** Tailoring these efforts to Purulia's socio-cultural ethos could ensure their feasibility and sustainability, translating research insights into meaningful improvements in adolescent resilience and well-being.

Hypothesis-Wise Conclusion

Here is a **hypothesis-wise conclusion** based on the results of the study, written with proper citations and references.

Conclusion for H_1

The first hypothesis proposed that there remain statistically significant multiple regression coefficients to predict test anxiety through different facets of achievement motivation and perfectionism of school-going adolescents (males and females considered together). The results confirmed this hypothesis, as variables such as non-display of imperfection, interpersonal relations, perfectionistic self-promotion, achievement anxiety, and sports emerged as significant predictors of test anxiety. This indicates that both motivational and perfectionistic dimensions collectively explain a meaningful variance in adolescents' test anxiety, corroborating prior findings that maladaptive perfectionism and achievement-related pressures exacerbate test-related stress **(Bong et al., 2014; Stoeber & Rambow, 2007).**

Conclusion for H_2

The second hypothesis posited that significant regression coefficients exist to predict test anxiety from achievement motivation and perfectionism among female adolescents. The results supported this hypothesis. For females, perfectionistic self-promotion, interpersonal relations, non-display of imperfection, sports, general interest, need for achievement, relevance of school to future goals, and achievement anxiety significantly predicted test anxiety. Interestingly, both maladaptive and adaptive factors were influential, with some variables (e.g., interpersonal relations and general interest) negatively predicting anxiety, suggesting a nuanced pattern in girls' academic experiences. This aligns with research showing that perfectionistic tendencies, combined with motivational drives, play a central role in shaping test anxiety among adolescent females **(Damoc, 2014; Hewitt & Flett, 1991).**

Conclusion for H_3

The third hypothesis assumed that significant regression coefficients remain to predict test anxiety from facets of achievement motivation and perfectionism among male adolescents. The analysis validated this assumption. Among males, nondisclosure of imperfection, non-display of imperfection, interpersonal relations, and achievement anxiety significantly predicted test anxiety. The strong influence of perfectionism-related dimensions highlights that boys' anxiety is particularly sensitive to self-presentation concerns and achievement-related apprehensions. These findings resonate with earlier studies indicating that socially prescribed perfectionism and achievement-related fears are strongly associated with male students' test anxiety **(Putwain & Symes, 2011; Zeidner, 1998).**

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Overall, the results substantiate all three hypotheses and demonstrate that both achievement motivation and perfectionism substantially contribute to adolescents' test anxiety, albeit with gender-specific variations. These findings underscore the importance of addressing perfectionistic tendencies and motivational pressures through gender-sensitive interventions to alleviate test anxiety and promote academic well-being.

Overall Conclusion

The present investigation examined the predictive power of achievement motivation and perfectionism on test anxiety among school-going adolescents of Purulia district, with separate analyses for male and female students. The findings collectively supported all three hypotheses (H_1, H_2, and H_3), establishing that multiple facets of both achievement motivation and perfectionism significantly predict test anxiety across groups.

When considering adolescents as a whole, non-display of imperfection, interpersonal relations, perfectionistic self-promotion, achievement anxiety, and sports emerged as robust predictors of test anxiety, highlighting the interplay of both maladaptive perfectionism and motivational pressures. For female adolescents, a broader range of variables—including perfectionistic self-promotion, interpersonal relations, non-display of imperfection, sports, general interest, need for achievement, relevance of school to future goals, and achievement anxiety—were found to contribute significantly, with some factors exerting protective effects (e.g., interpersonal relations and general interest). In contrast, male adolescents' test anxiety was most strongly predicted by perfectionism-related dimensions (nondisclosure and non-display of imperfection) and achievement anxiety, indicating that their vulnerability is particularly tied to self-presentation and performance concerns.

Taken together, these results underscore the multifaceted role of perfectionism and motivation in shaping test anxiety during adolescence. The gender-specific differences observed suggest that while both boys and girls are influenced by perfectionism and achievement-related drives, girls' experiences are shaped by a broader motivational spectrum, whereas boys' anxiety is more tightly linked to perfectionistic self-presentation. These findings are consistent with prior research highlighting perfectionism as a core antecedent of test anxiety **(Hewitt & Flett, 1991; Stoeber & Rambow, 2007)** and the amplifying effect of achievement-related pressures on adolescents' stress (**Bong et al., 2014; Putwain & Symes, 2011; Zeidner, 1998).**

Overall, this study affirms that achievement motivation and perfectionism jointly and significantly affect adolescents' test anxiety, though in gender-differentiated ways. Interventions aimed at reducing test anxiety should therefore consider both the adaptive and maladaptive aspects of these constructs and adopt gender-sensitive approaches to foster resilience, emotional regulation, and healthier academic engagement.

Implications and Recommendations/Policy Implications

The findings of this study hold significant implications for educators, parents, and policymakers dedicated to fostering adolescent well-being and academic success. Evidence suggests that instructional practices minimising fear appeals and excessive evaluative pressure, while fostering mastery-oriented environments, are more effective in reducing test anxiety and promoting positive motivation **(Putwain & Symes, 2011).** Teachers, therefore, should focus on supportive pedagogy that emphasises growth and effort rather than rigid performance benchmarks. Likewise, parents must recognise the detrimental impact of maladaptive perfectionism and unrealistic expectations on adolescents' mental health. Encouraging balanced goal-setting, validating effort, and providing unconditional emotional support can substantially reduce anxiety and strengthen resilience **(Hewitt & Flett, 1991; Deb, Strodl, & Sun, 2015).**

For policymakers, the study underscores the need to integrate psychosocial interventions within school curricula to address test anxiety, perfectionism, and achievement-related stress. Structured programs on life skills, stress management, and mindfulness-based practices can help adolescents regulate emotions and develop adaptive coping strategies **(Cheng et al., 2022; Zhou et al., 2023).** Moreover, gender-sensitive approaches are critical, as boys and girls may exhibit different vulnerability patterns to perfectionism and achievement motivation **(Deb, Thomas, & Walsh, 2015).**

Expanding the current model to include contextual variables such as parental expectations, peer comparison, and school practices would further enhance explanatory power, since these sociocultural factors strongly influence adolescents' motivation and stress experiences **(Deb, Strodl, & Sun, 2015; Putwain & Symes, 2011).** In parallel, protective factors like resilience, mindfulness, and adaptive coping mechanisms should be systematically examined, as these can buffer the adverse effects of perfectionism and performance pressure **(Cheng et al., 2022; Zhou et al., 2023).**

Based on these insights, the following context-specific recommendations are advanced:

For Schools

a) Incorporate stress management and mindfulness workshops into the curriculum to foster adaptive coping **(Cheng et al., 2022; Zhou et al., 2023).**

b) Promote classroom environments that emphasize mastery, effort, and growth, thereby reducing evaluative stress **(Putwain & Symes, 2011).**

c) Provide teacher training to reduce reliance on fear appeals and excessive evaluative practices, while fostering supportive interactions (**Owens et al., 2012).**

For Parents

a) Establish awareness programs that highlight the negative effects of unrealistic expectations and peer comparison on adolescents' psychological health (**Deb, Strodl, & Sun, 2015).**

b) Encourage balanced goal-setting and unconditional emotional support to promote resilience and intrinsic motivation **(Deb, Thomas, & Walsh, 2015).**

c) Strengthen parent–school collaboration to ensure consistency in nurturing achievement and well-being.

For Policymakers

a) Fund and implement school-based psychosocial programs focusing on resilience-building, mindfulness, and stress management, particularly in socio-economically pressured regions like Purulia **(Kumar et al., 2022).**

b) Develop culturally sensitive guidelines for schools to address perfectionism, achievement pressure, and test anxiety.

c) Formulate gender-responsive educational policies recognizing that boys and girls may experience and cope with test anxiety differently **(Cheng et al., 2022; Deb, Strodl, & Sun, 2015).**

By implementing these multi-level recommendations, the research can be translated into tangible strategies that mitigate test-related stress, foster academic resilience, and promote the psychological well-being of adolescents in Purulia and similar socio-cultural contexts.

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