A Probe into the Effect of Self-Concept on the Development of Academic Motivation of the School-Going Adolescents of Nadia District

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ABSTRACT

This study examined the predictive role of self-concept in shaping the academic motivation of school-going adolescents in Nadia District, West Bengal. Employing a descriptive survey design with correlational analysis, data were collected from 500 students aged 14-16 years (Grades IX and X) through stratified random sampling. The Self-Concept Inventory **(Shah, 1986)** and the Motivated Strategies for Learning Questionnaire **(Pintrich & De Groot, 1990)** were administered to assess multidimensional self-concept and academic motivation, respectively. Stepwise multiple regression analyses revealed that cognitive, emotional, social, and aesthetic dimensions of self-concept significantly predicted academic motivation, with notable gender variations: cognitive, emotional, and aesthetic self-concepts were stronger predictors among males, while cognitive and social self-concepts were key predictors for females. These findings underscore the critical influence of self-perceptions on motivational processes, aligning with prior evidence that positive self-concept enhances persistence, engagement, and achievement **(Marsh & Martin, 2011; Guay et al., 2010).** The study suggests that targeted interventions—such as counselling, mentorship, and supportive classroom environments—can foster positive self-concept and, consequently, sustain academic motivation among adolescents. The implications extend to educators, psychologists, and policymakers seeking evidence-based strategies to strengthen adolescent learning outcomes.

Keywords: Academic motivation, self-concept, adolescents, predictive analysis, educational psychology

INTRODUCTION

Adolescence is a formative stage of human development marked by rapid cognitive, emotional, and social changes that shape individuals' self-perceptions and academic trajectories **(Steinberg, 2017).** During this period, **self-concept** an individual's perception of their abilities, traits, and worth-emerges as a central psychological construct influencing motivation and achievement (**Shavelson, Hubner, & Stanton, 1976; Harter, 1999).** A strong, positive self-concept fosters persistence, goal-setting, and resilience in learning, while a fragile or negative self-concept can lead to disengagement, academic avoidance, and lower achievement outcomes **(Marsh & Martin, 2011).**

The interplay between **self-concept and academic motivation** has been a focal point in educational psychology. Theories such as **Self-Determination Theory (Deci & Ryan, 1985, 2000)** and the **Expectancy-Value Model (Eccles & Wigfield, 2002; Eccles & Roeser, 2011)** explain how students' perceptions of competence, autonomy, and value shape their intrinsic and extrinsic motivation to learn. Students with higher self-concept are more likely to perceive learning as meaningful, exert greater effort, and persist in the face of challenges **(Marsh & Craven, 2006; Ryan & Deci, 2009).** Conversely, adolescents with a diminished self-

concept may develop motivational deficits that compromise academic performance and long-term educational attainment **(Valentine, DuBois, & Cooper, 2004).**

In addition to theoretical perspectives, empirical research highlights the importance of contextual influences. Studies demonstrate that factors such as family support, peer relationships, and teacher feedback significantly shape adolescents' self-concept and motivation **(Guay et al., 2010; Wentzel, 1998).** Moreover, cultural and socioeconomic contexts play a crucial role in determining how self-concept develops and influences motivation **(Markus & Kitayama, 1991; Sirin, 2005).** For instance, while individualistic societies emphasise autonomy and self-enhancement, collectivist contexts often frame self-concept within relational and communal values, thereby altering motivational orientations (**Singh & Agrawal, 2021).**

Within the Indian educational landscape, self-concept and academic motivation are intricately shaped by parental expectations, socio-economic conditions, and school environments. Prior research in India confirms a positive association between self-concept and academic motivation, showing that adolescents with stronger self-concept demonstrate greater engagement, resilience, and achievement **(Srivastava & Misra, 2007; Rani & Govinda, 2013).** However, despite this evidence, **localized inquiries remain scarce in specific districts like Nadia**, where unique demographic and socio-cultural dynamics may significantly influence adolescents' academic experiences. Understanding these contextual factors is critical for developing effective educational policies and interventions tailored to regional needs.

This study seeks to address this gap by investigating the predictive role of different facets of self-concept—cognitive, emotional, social, and aesthetic—on the academic motivation of school-going adolescents in Nadia District, West Bengal. By employing validated psychometric instruments such as the **Self-Concept Inventory (Shah, 1986)** and the **Motivated Strategies for Learning Questionnaire (Pintrich & De Groot, 1990)**, this research offers an evidence-based analysis of how adolescents' self-perceptions contribute to their motivational orientations. The findings are expected to yield both theoretical insights into the relationship between self-concept and motivation and practical recommendations for educators, psychologists, and policymakers to design interventions that strengthen students' self-beliefs and, in turn, enhance their academic motivation.

Rationale of the Study

Among the various psychological constructs, self-concept has emerged as a vital determinant of academic motivation, affecting students' beliefs about their abilities, learning behaviours, and aspirations (**Marsh & Craven, 2006**). Given the intricate interplay between self-concept and motivation, it is imperative to explore their relationship, particularly among school-going adolescents, who are at a formative stage in their educational journey.

The district of Nadia in West Bengal, India, presents a unique demographic and socio-cultural context that necessitates localised research on self-concept and academic motivation. Studies have indicated that socioeconomic backgrounds, parental expectations, and school environments significantly shape adolescents' self-concept and academic drive (**Skaalvik & Skaalvik, 2009**). However, there remains a dearth of empirical studies that focus specifically on how these factors influence students in Nadia District. Understanding the role of self-concept in shaping academic motivation within this particular geographical and cultural setting can provide valuable insights for educators, policymakers, and psychologists.

Existing literature has demonstrated a positive correlation between self-concept and academic motivation, with students possessing a higher self-concept often displaying greater persistence, engagement, and achievement in academic pursuits (**Guay, Marsh, & Boivin, 2003**). However, the extent to which different dimensions of self-concept (such as social, academic, and emotional self-concept) interact to influence motivation remains underexplored, particularly in the Indian educational context. This study seeks to bridge this research gap by providing a comprehensive analysis of the relationship between self-concept and academic motivation among adolescents in Nadia District.

Furthermore, academic motivation plays a crucial role in determining educational outcomes, influencing students' willingness to learn, their perseverance in the face of challenges, and their overall academic

performance (**Pintrich, 2003**). By examining the impact of self-concept on academic motivation, this study aims to contribute to the growing body of literature on student psychology and motivation, offering evidence-based recommendations for educators and policymakers to foster a positive learning environment.

The findings of this research are expected to have significant implications for educational practices and interventions. A better understanding of how self-concept influences academic motivation can lead to the development of targeted strategies for enhancing students' self-perception, ultimately leading to improved motivation and academic success. As the Indian education system continues to evolve, studies such as this one are essential in informing policies that support student development holistically.

This study was valuable in examining the critical psychological construct of self-concept and its impact on academic motivation, a key factor in student success. Gaining insight into this relationship enables educators and practitioners to create targeted interventions that enhance adolescents' academic experiences and long-term educational outcomes. Furthermore, the findings have practical significance for developing school-based support systems that cultivate both a positive self-concept and strong motivation, ultimately contributing to academic achievement in adolescents.

The rationale for this study stems from the recognition that **self-concept** is one of the most significant psychological constructs influencing adolescents' academic experiences. Self-concept, defined as the perception an individual holds about their abilities and worth **(Shavelson, Hubner, & Stanton, 1976; Rosenberg, 1979),** plays a crucial role in shaping learning behaviour, academic engagement, and motivation. Adolescence, being a developmental stage marked by identity formation and heightened sensitivity to self-evaluations, offers a critical period during which self-concept can profoundly influence educational trajectories **(Harter, 2012; Steinberg, 2017).** Given this, examining the relationship between self-concept and academic motivation provides valuable insights into the psychological mechanisms that underlie scholastic achievement.

The **educational context of Nadia District in West Bengal** further strengthens the rationale of this investigation. Adolescents in this region experience unique socio-cultural and economic influences that shape their academic self-concept and motivation **(Singh & Agrawal, 2021).** Previous research has shown that contextual factors such as socioeconomic background, parental expectations, and school environment significantly impact students' motivation and self-concept **(Skaalvik & Skaalvik, 2009; Sirin, 2005).** However, empirical studies addressing how these dynamics manifest within Nadia District remain limited. This geographical and cultural specificity makes localized research both necessary and relevant, ensuring that findings are not only theoretically meaningful but also practically applicable to the educational policies and interventions of the region.

Theoretically, the study draws on the **Self-Determination Theory(Deci & Ryan, 1985; Ryan & Deci, 2009),** which posits that autonomy, competence, and relatedness foster intrinsic motivation, and on the **Expectancy-Value Theory(Eccles & Wigfield, 2002),** which emphasizes students' self-beliefs as critical to persistence and effort. Both frameworks highlight how students' perceptions of themselves directly influence their motivation to engage in academic tasks. Empirical evidence supports this view: adolescents with a stronger self-concept demonstrate higher levels of persistence, academic resilience, and achievement **(Marsh & Craven, 2006; Guay, Marsh, & Boivin, 2003; Valentine, DuBois, & Cooper, 2004).** Despite this, gaps remain in understanding the multidimensional nature of self-concept—social, emotional, cognitive, and aesthetic dimensions and their specific predictive roles in academic motivation within the Indian context.

Another justification for the present study lies in the growing need for **evidence-based educational interventions**. Prior research indicates that fostering positive self-concept leads to enhanced academic motivation and improved outcomes **(Behera, 2017; Areepattamannil, 2012)**. Yet, the extent to which these findings hold true across diverse gender groups and socio-cultural contexts requires further exploration. Studies suggest that gender differences exist in self-concept and academic motivation, with males often reporting higher self-concept in mathematics and science, while females demonstrate stronger self-concept in language-related domains **(Wilgenbusch & Merrell, 1999; Eccles et al., 1993).** By disaggregating results by gender, this study seeks to illuminate such differences, thereby offering more nuanced insights for educators and policymakers.

Finally, the study's rationale is rooted in its **practical and policy implications**. Understanding the role of self-concept in shaping academic motivation can guide teachers, school counsellors, and administrators in designing targeted interventions that cultivate students' self-perceptions and, in turn, enhance their academic engagement. This aligns with the broader educational goal of nurturing self-regulated, motivated learners capable of succeeding in increasingly competitive academic environments **(Zimmerman & Schunk, 2011).** As India continues to reform its education system under the **National Education Policy (NEP) 2020**, localized psychological research of this nature can provide valuable direction for implementing student-centric practices that bridge psychological theory with classroom realities.

In sum, the rationale of this study rests on three interconnected foundations:

1. The **psychological significance** of self-concept as a determinant of academic motivation.
2. The **contextual necessity** of examining these constructs within the socio-cultural setting of Nadia District.
3. The **practical utility** of generating evidence-based insights that inform educational practices, interventions, and policies.

By addressing these dimensions, the study not only contributes to the field of educational psychology but also carries the potential to foster academic success and well-being among adolescents in India.

Objective of the Study

The broad objective of the study was –

To explore the impacts of **Self-Concept** on the development of **Academic Motivation** of school-going adolescents.

The **Hypotheses** were –

H_1: There are statistically significant multiple regression coefficients to frame the equation to predict **Academic Motivation** with the help of different facets of **Self-Concept** of the school-going adolescents, considering both males and females as a whole.

H_2: There are statistically significant multiple regression coefficients to frame the equation to predict **Academic Motivation** with the help of different facets of **Self-Concept** of the **male** school-going adolescents.

H_3: There are statistically significant multiple regression coefficients to frame the equation to predict **Academic Motivation** with the help of different facets of **Self-Concept** of the **female** school-going adolescents.

REVIEW OF THE LITERATURE

The relationship between self-concept and academic motivation has been extensively studied in the field of educational psychology. This review synthesises existing literature to establish the theoretical and empirical foundation of the study.

Self-Concept: Definition and Theoretical Foundations

Self-concept is defined as an individual's perception of themselves, encompassing cognitive and affective components (**Shavelson, Hubner, & Stanton, 1976**). The multidimensional nature of self-concept has been highlighted in various studies, with domains such as academic, social, and emotional self-concept (**Marsh & Craven, 2006**). The self-concept theory suggests that individuals with a positive self-perception tend to engage more actively in academic tasks (**Rosenberg, 1979**).

Academic Motivation: Conceptualisation and Models

Academic motivation refers to the intrinsic and extrinsic factors that drive students to achieve educational success (**Deci & Ryan, 1985**). The Self-Determination Theory (SDT) proposed by **Deci and Ryan (2000**) differentiates between intrinsic motivation, which stems from internal satisfaction, and extrinsic motivation, which is influenced by external rewards. Studies have found that students with higher intrinsic motivation tend to exhibit better academic performance and persistence (**Ryan & Deci, 2009**).

Relationship Between Self-Concept and Academic Motivation

Empirical evidence suggests a strong correlation between self-concept and academic motivation (**Guay, Marsh, & Boivin, 2003**). **Marsh and O'Mara (2008)** found that a positive self-concept enhances students' intrinsic motivation, leading to greater academic achievement. Moreover, a meta-analysis conducted by **Valentine, DuBois, and Cooper (2004)** indicated that self-concept interventions significantly improve students' academic motivation and performance.

Gender Differences in Self-Concept and Academic Motivation

Gender differences in self-concept and academic motivation have been widely explored. Some studies suggest that male students tend to have a higher academic self-concept in subjects like mathematics and science, whereas female students often exhibit a higher self-concept in language-related disciplines (**Wilgenbusch & Merrell, 1999**). Additionally, **Eccles et al. (1993)** argued that gender-role socialisation plays a crucial role in shaping academic motivation and self-concept.

Cultural and Socioeconomic Influences on Self-Concept and Motivation

Research highlights the impact of cultural and socioeconomic factors on self-concept and academic motivation. According to **Markus and Kitayama (1991)**, self-concept is culturally constructed, with individualistic societies emphasising autonomy and collectivist cultures promoting interdependent self-concepts. Socioeconomic status (SES) has also been found to influence academic motivation, with students from higher SES backgrounds often exhibiting higher self-concept and motivation levels (**Sirin, 2005**).

Empirical Studies in the Indian Context

In the Indian educational context, studies indicate a positive correlation between self-concept and academic motivation. **Srivastava and Misra (2007)** found that Indian adolescents with higher self-concept demonstrated better academic engagement and resilience. Additionally, **Rani and Govinda (2013)**emphasised the role of parental support in shaping self-concept and motivation among school-going adolescents.

The existing literature provides substantial evidence that self-concept plays a critical role in the development of academic motivation among adolescents. However, further research is needed to explore how contextual factors, such as educational policies and peer influences, mediate this relationship, particularly within the socio-cultural framework of Nadia District.

RESEARCH METHODOLOGY

Research methodology serves as the backbone of any scientific inquiry, ensuring the reliability and validity of findings (**Creswell & Creswell, 2018**). In the present study, a systematic approach was adopted to investigate the effect of self-concept on the development of academic motivation among school-going adolescents in Nadia District. A descriptive survey research design was employed, as it allows for an in-depth examination of the relationships between psychological constructs in a naturalistic setting (**Best & Kahn, 2016**). The study utilised standardised psychometric instruments to assess self-concept and academic motivation, ensuring robust data collection. The sample was selected using stratified random sampling to achieve representativeness across demographic variables (**Fraenkel, Wallen, & Hyun, 2019**). The subsequent sections elaborate on the research design, sampling techniques, instruments, and statistical methods employed to derive meaningful conclusions.

Variables

Variables play a crucial role in scientific research, as they define the scope and direction of the study (**Creswell, 2014**). In the present study, self-concept is considered the independent variable, while academic motivation serves as the dependent variable.

Independent Variable

In the multiple regression analysis of the present study, the "independent variables" were the different dimensions of self-concept (such as 'social self-concept, emotional self-concept, physical self-concept, cognitive self-concept, aesthetic self-concept, political self-concept, job-related self-concept, self-confidence, self-concept related to beliefs and traditions, and self-concept related to personality traits').

Dependent Variable

In the multiple regression analysis of the present study, the "dependent variable" was academic motivation.

Sample

The sample selection is a critical aspect of any empirical research, ensuring the generalizability and validity of findings (**Creswell & Creswell, 2018**). In this study, the sample comprises school-going adolescents from Nadia District, chosen through a stratified random sampling technique to represent diverse demographic and socio-economic backgrounds. This approach allows for an in-depth examination of the relationship between self-concept and academic motivation, minimising biases and enhancing reliability (**Best & Kahn, 2016**).

To make the sample representative multiphasic stratified random sampling technique was adopted. In the present study, 500 school-going adolescents aged 14-16 years were studied. Studying in the 9^{th} and 10^{th}standards were randomly selected from 7 Government Sponsored Secondary and Higher Secondary Schools (Bengali medium) of Nadia District, West Bengal.

Tools of Research

Research tools are essential instruments for systematically collecting, measuring, and analysing data in scientific inquiries (**Kothari, 2004**). In the context of the present study, appropriate tools have been employed to assess self-concept and academic motivation among school-going adolescents in Nadia District. Standardised psychological scales ensure reliability and validity, thereby enhancing the accuracy of findings (**Anastasi & Urbina, 1997**). The selection and justification of these research tools are crucial for deriving meaningful interpretations and contributing to the field of educational psychology.

The following research tools were used in the present study for data collection.

Self-Concept Inventory (Shah, 1986)

The Self-Concept Inventory (SCI), developed by Dr. Beena Shah, is a comprehensive tool consisting of 62 items across 10 subscales. These subscales assess different dimensions of self-concept, including social, emotional, physical, cognitive, aesthetic, political, job-related, self-confidence, beliefs and traditions, and personality traits. Each item is rated on a 5-point Likert scale, ranging from "Always" to "Never." In this study, a Bengali version of the scale was used, with a normalised mean score ranging from 1 to 5 and a midpoint of 3. The scale demonstrated strong reliability ($\alpha = 0.918$) and validity, ensuring an accurate assessment of self-concept dimensions.

Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich & De Groot, 1990)

The Motivated Strategies for Learning Questionnaire (MSLQ), developed by Pintrich and De Groot (1990), consists of 44 items rated on a 7-point Likert scale (1 = never true to 7 = definitely true). It assesses student

motivation and learning strategies across five key dimensions. Self-Efficacy (9 items, α = 0.89) measures students' confidence in their academic abilities. Intrinsic Value (9 items, α = 0.87) evaluates their interest in learning, perceived importance of coursework, and preference for challenging tasks. Test Anxiety (4 items, α = 0.75) examines worries and cognitive interference during exams. The questionnaire also includes two cognitive scales: Cognitive Strategy Use (13 items, α = 0.83), which assesses learning strategies like rehearsal, elaboration, and organisation, and Self-Regulation (9 items, α = 0.74), which measures meta-cognitive strategies such as planning and monitoring, along with effort management strategies for task persistence. The MSLQ provides valuable insights into students' motivation and study habits, supporting educational interventions. In this study, a Bengali version of the scale was used, with a normalised mean score ranging from 1 to 7 and a midpoint of 4.

RESULTS

To examine the influence of various facets of self-concept on the academic motivation of school-going adolescents, a stepwise multiple regression analysis was conducted.

Multiple Regression Analysis in the "Stepwise" Method Considering School-Going Male and Female Adolescents as a whole

Table 4.1(a) presents the outcomes, indicating that three specific independent variables were included in the multiple regression analysis.

Table 4.1 (a): Variables Entered in Multiple Regression Analysis Considering Motivated Strategies for Learning Questionnaire (MSLQ) Score as Dependent Variable

Model	Variables Entered	Method
1	Cognitive Self-Concept	Stepwise (Criteria: Probability-of-F-to-enter <= 0.050)
2	Emotional Self-Concept	Stepwise (Criteria: Probability-of-F-to-enter <= 0.050)
3	Social Self-Concept	Stepwise (Criteria: Probability-of-F-to-enter <= 0.050)

Method of analysis – Here **stepwise** method of analysis was considered.

Table 4.1(b) provides the model summary for the multiple regression analysis. The results indicate that the changes in F were remarkably significant across all three models.The multiple correlation (R) between academic motivation and the linear combination of 'Cognitive Self-Concept, Emotional Self-Concept, Social Self-Concept' is 0.427. The multiple R^2 is 0.18. The linear combination of 'Cognitive Self-Concept, Emotional Self-Concept, Social Self-Concept' explains 18% variance in academic motivation. The adjusted R^2 value is 0.18.

Table 4.1 (b): Model Summary in Multiple Regression Analysis Considering Motivated Strategies for Learning Questionnaire (MSLQ) Score 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
1	0.349[a]	0.12	0.12	0.61	0.12	69.15	1	498	0.00
2	0.404[b]	0.16	0.16	0.59	0.04	24.68	1	497	0.00
3	**0.427[c]**	**0.18**	**0.18**	0.59	0.02	11.60	1	496	0.00

a. Predictors: (Constant), Cognitive Self-Concept
b. Predictors: (Constant), Cognitive Self-Concept, Emotional Self-Concept
c. Predictors: (Constant), Cognitive Self-Concept, Emotional Self-Concept, Social Self-Concept

Table 4.1(c) displays the ANOVA results in the context of multiple regression analysis. The findings highlight that the F-values were highly significant for all three models. The final calculated value of the F is 36.93, which is significant at the .01 level.

Table 4.1 (c): ANOVA in Multiple Regression Analysis Considering Motivated Strategies for Learning Questionnaire (MSLQ) Score as Dependent Variable

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25.43	1	25.43	69.15	0.000[b]
	Residual	183.14	498	0.37		
	Total	208.57	499			
2	Regression	34.10	2	17.05	48.56	0.000[c]
	Residual	174.48	497	0.35		
	Total	208.57	499			
3	Regression	38.08	3	12.69	**36.93**	0.000[d]
	Residual	170.49	496	0.34		
	Total	208.57	499			

a. Dependent Variable: Academic Motivation
b. Predictors: (Constant), Cognitive Self-Concept
c. Predictors: (Constant), Cognitive Self-Concept, Emotional Self-Concept
d. Predictors: (Constant), Cognitive Self-Concept, Emotional Self-Concept, Social Self-Concept,

Table 4.1(d) presents the coefficients obtained from the multiple regression analysis.

Table 4.1 (d): Coefficients in Multiple Regression Analysis Considering Motivated Strategies for Learning Questionnaire (MSLQ) Scores of School-going Adolescents as Dependent Variable

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	β		
1	(Constant)	3.79	0.16		23.54	0.00
	Cognitive Self-Concept	0.38	0.05	0.35	8.32	0.00
2	(Constant)	2.91	0.24		12.31	0.00
	Cognitive Self-Concept	0.33	0.05	0.31	7.34	0.00
	Emotional Self-Concept	0.30	0.06	0.21	4.97	0.00
3	(Constant)	2.50	0.26		9.51	0.00
	Cognitive Self-Concept	0.29	0.05	0.26	6.06	0.00
	Emotional Self-Concept	0.25	0.06	0.18	4.20	0.00
	Social Self-Concept	0.19	0.06	0.15	3.41	0.00

For the Model 3, the linear multiple regression equation was as follows:

Academic Motivation		2.50					
	=	0.29	×	1	Cognitive	Emotional	Social
		0.25					
		0.19					

Academic Motivation = 2.50 + 0.29 × Cognitive Self-Concept + 0.25 × Emotional Self-Concept + 0.19 × Social Self-Concept

Multiple Regression Analysis in the "Stepwise" Method Considering Male School-Going

Table 4.2(a) presents the outcomes, indicating that three specific independent variables were included in the multiple regression analysis.

Table 4.2 (a): Variables Entered in Multiple Regression Analysis Considering Motivated Strategies for Learning Questionnaire (MSLQ) Score as Dependent Variable

Model	Variables Entered	Method
1	Cognitive Self-Concept	Stepwise (Criteria: Probability-of-F-to-enter <= 0.050
2	Emotional Self-Concept	Stepwise (Criteria: Probability-of-F-to-enter <= 0.050
3	Aesthetic Self-Concept	Stepwise (Criteria: Probability-of-F-to-enter <= 0.050

Method of analysis – Here **stepwise** method of analysis was considered.

Table 4.2(b) provides the model summary for the multiple regression analysis. The results indicate that the changes in F were remarkably significant across all three models. The multiple correlation (R) between academic motivation and the linear combination of 'Cognitive Self-Concept, Emotional Self-Concept, Aesthetic Self-Concept' is 0.517. The multiple R^2 is 0.27. The linear combination of 'Cognitive Self-Concept, Emotional Self-Concept, Aesthetic Self-Concept' explains 27% variance in academic motivation. The adjusted R^2 value is 0.26.

Table 4.2 (b):Model Summary in Multiple Regression Analysis Considering Motivated Strategies for Learning Questionnaire (MSLQ) Score 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
1	0.379[a]	0.14	0.14	0.64	0.14	40.61	1	242	0.00
2	0.459[b]	0.21	0.20	0.62	0.07	20.49	1	241	0.00
3	**0.517[c]**	**0.27**	**0.26**	0.60	0.06	18.59	1	240	0.00

a. Predictors: (Constant), Cognitive Self-Concept
b. Predictors: (Constant), Cognitive Self-Concept, Emotional Self-Concept
c. Predictors: (Constant), Cognitive Self-Concept, Emotional Self-Concept, Aesthetic Self- Concept

Table 4.2(c) displays the ANOVA results in the context of multiple regression analysis. The findings highlight that the F-values were highly significant for all three models. The final calculated value of the F is 29.22, which is significant at the .01 level.

Table 4.2 (c): ANOVA in Multiple Regression Analysis Considering Motivated Strategies for Learning Questionnaire (MSLQ) Score as Dependent Variable

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.81	1	16.81	40.61	0.000[b]
	Residual	100.19	242	0.41		
	Total	117.00	243			
2	Regression	24.67	2	12.33	32.19	0.000[c]
	Residual	92.34	241	0.38		
	Total	117.00	243			
3	Regression	31.30	3	10.43	**29.22**	0.000[d]
	Residual	85.70	240	0.36		
	Total	117.00	243			

a. Dependent Variable: Academic Motivation
b. Predictors: (Constant), Cognitive Self-Concept
c. Predictors: (Constant), Cognitive Self-Concept, Emotional Self-Concept
d. Predictors: (Constant), Cognitive Self-Concept, Emotional Self-Concept, Aesthetic Self-Concept,

Table 4.2(d) presents the coefficients obtained from the multiple regression analysis.

Table 4.2 (d): Coefficients in Multiple Regression Analysis Considering Motivated Strategies for Learning Questionnaire (MSLQ) Scores of School-going Adolescents as Dependent Variable

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**β**		
1	(Constant)	3.51	0.24		14.37	0.00
	Cognitive Self-Concept	0.45	0.07	0.38	6.37	0.00
2	(Constant)	2.31	0.36		6.52	0.00
	Cognitive Self-Concept	0.40	0.07	0.34	5.85	0.00
	Emotional Self-Concept	0.40	0.09	0.26	4.53	0.00
3	(Constant)	1.51	0.39		3.88	0.00
	Cognitive Self-Concept	0.33	0.07	0.28	4.81	0.00
	Emotional Self-Concept	0.44	0.09	0.29	5.18	0.00
	Aesthetic Self-Concept	0.24	0.06	0.25	4.31	0.00

For the Model 3, the linear multiple regression equation was as follows:

Academic Motivation		1.51					
	=	0.33	×	1	Cognitive Self-Concept	Emotional Self-Concept	Aesthetic Self-Concept
		0.44					
		0.24					

Academic Motivation = 1.51 +0.33 × Cognitive Self-Concept + 0.44 × Emotional Self-Concept + 0.24 × Aesthetic Self-Concept

Multiple Regression Analysis in the "Stepwise" Method Considering Female School-Going

Table 4.3(a) presents the outcomes, indicating that two specific independent variables were included in the multiple regression analysis.

Table 4.3 (a): Variables Entered in Multiple Regression Analysis Considering Motivated Strategies for Learning Questionnaire (MSLQ) Score as Dependent Variable

Model	**Variables Entered**	**Method**
1	Cognitive Self-Concept	Stepwise (Criteria: Probability-of-F-to-enter <= 0.050
2	Social Self-Concept	Stepwise (Criteria: Probability-of-F-to-enter <= 0.050

Method of analysis – Here **stepwise** method of analysis was considered.

Table 4.3(b) provides the model summary for the multiple regression analysis. The results indicate that the changes in F were remarkably significant across two models. The multiple correlation (R) between academic motivation and the linear combination of 'Cognitive Self-Concept and Social Self-Concept' is 0.349. The multiple R^2 is 0.12. The linear combination of 'Cognitive Self-Concept and Social Self-Concept' explains 12% variance in academic motivation. The adjusted R^2 value is 0.12.

Table 4.3 (b): Model Summary in Multiple Regression Analysis Considering Motivated Strategies for Learning Questionnaire (MSLQ) Score 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**
1	0.309[a]	0.10	0.09	0.56	0.10	26.80	1	254	0.00
2	**0.349[b]**	**0.12**	**0.12**	0.56	0.03	7.66	1	253	0.01
a. Predictors: (Constant), Cognitive Self-Concept b. Predictors: (Constant), Cognitive Self-Concept, Social Self-Concept									

Table 4.3(c) displays the ANOVA results in the context of multiple regression analysis. The findings highlight that the F-values were highly significant for two models. The final calculated value of the F is 17.59, which is significant at the .01 level.

Table 4.3 (c): ANOVA in Multiple Regression Analysis Considering Motivated Strategies for Learning Questionnaire (MSLQ) Score as Dependent Variable

Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	8.56	1	8.56	26.80	0.000[b]
	Residual	81.08	254	0.32		
	Total	89.64	255			
2	Regression	10.94	2	5.47	**17.59**	0.000[c]
	Residual	78.70	253	0.31		
	Total	89.64	255			
a. Dependent Variable: Academic Motivation b. Predictors: (Constant), Cognitive Self-Concept c. Predictors: (Constant), Cognitive Self-Concept, Social Self-Concept						

Table 4.3(d) presents the coefficients obtained from the multiple regression analysis.

Table 4.3 (d): Coefficients in Multiple Regression Analysis Considering Motivated Strategies for Learning Questionnaire (MSLQ) Scores of School-going Adolescents as Dependent Variable

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**β**		
1	(Constant)	4.10	0.21		19.40	0.00
	Cognitive Self-Concept	0.31	0.06	0.31	5.18	0.00
2	(Constant)	3.54	0.29		12.28	0.00
	Cognitive Self-Concept	0.25	0.06	0.25	4.01	0.00
	Social Self-Concept	0.20	0.07	0.17	2.77	0.01

For the model-2, the linear multiple regression equation was as follows:

Academic Motivation		3.54				
	=	0.25	×	1	Cognitive Self-Concept	Social Self-Concept
		0.20				

Academic Motivation = 3.54 +0.25 × Cognitive Self-Concept + 0.20 × Social Self-Concept

DISCUSSION

Hypothesis-wise discussions are presented here.

Hypothesis (H_1)

The findings supported **H_1**. Stepwise regression analysis revealed that **Cognitive Self-Concept, Emotional Self-Concept, and Social Self-Concept** together predicted academic motivation, explaining **18% of the variance** ($R^2 = 0.18$, $p < 0.01$). This suggests that adolescents' self-beliefs about intellectual competence, emotional resilience, and social connectedness jointly shape their motivational orientation. These results are consistent with the **reciprocal effects model** (Marsh & Craven, 2006), which posits that cognitive self-perceptions foster persistence, while social and emotional self-concepts enhance engagement and adaptability. Moreover, **Valentine, DuBois, and Cooper's (2004)** meta-analysis confirmed that multidimensional self-concept constructs exert a measurable influence on academic outcomes. Thus, **H1** highlights the collective importance of cognitive, emotional, and social domains in strengthening adolescents' motivation.

Hypothesis (H_2)

The results also confirmed **H_2**. Among male adolescents, **Cognitive Self-Concept, Emotional Self-Concept, and Aesthetic Self-Concept** significantly predicted academic motivation, jointly accounting for **27% of the variance** ($R^2 = 0.27$, $p < 0.01$). Emotional self-concept emerged as a particularly strong predictor ($\beta = 0.29$, $p < 0.01$), demonstrating that boys' ability to regulate and perceive emotional stability plays a key role in sustaining motivation. This supports **Bandura's (1997)** theory of self-efficacy, which emphasises emotional self-beliefs in sustaining effort and reducing performance-related anxiety. Furthermore, aesthetic self-concept reflecting creativity, appreciation for beauty, and artistic engagement was also significant, suggesting that creative pursuits contribute to intrinsic motivation. This aligns with **Self-Determination Theory (Deci & Ryan, 2000),** which stresses autonomy and personal interests as drivers of intrinsic motivation. Therefore, for male adolescents, the combined influence of cognitive competence, emotional stability, and creative appreciation provides a strong foundation for academic engagement.

Hypothesis (H_3)

The analysis upheld **H_3**. For female adolescents, **Cognitive Self-Concept and Social Self-Concept** significantly predicted academic motivation, jointly explaining **12% of the variance** ($R^2 = 0.12$, $p < 0.01$). This indicates that girls' motivation is more strongly tied to intellectual competence and social relationships than to emotional or aesthetic domains. The predictive role of social self-concept highlights the importance of peer acceptance, cooperation, and interpersonal connectedness for girls' engagement, consistent with **Wentzel's (1998)** findings that supportive social relationships foster academic achievement. Additionally, the contribution of cognitive self-concept reflects **Harter's (2012)** developmental view that adolescents who perceive themselves as competent learners demonstrate greater persistence in academic tasks. These results also align with **Wilgenbusch and Merrell's (1999)** meta-analysis, which found that female adolescents often place greater emphasis on relational and social aspects of self-concept in their motivational orientations.

Synthesis of Hypotheses Results

Across all three hypotheses, results demonstrate that **self-concept is a robust predictor of academic motivation**, though the relative importance of its dimensions varies by gender. Cognitive self-concept consistently predicted motivation across male, female, and combined groups, confirming its centrality in academic persistence and achievement **(Marsh & Martin, 2011).** For males, emotional and aesthetic self-concepts exerted stronger influences, underscoring the significance of emotional stability and creative engagement in sustaining motivation. For females, social self-concept emerged as a distinctive factor, highlighting the role of peer connectedness and belongingness in academic engagement. These findings reinforce the **multidimensionality of self-concept (Shavelson, Hubner, & Stanton, 1976)** and align with contemporary motivational theories that stress the interplay between self-beliefs, social contexts, and academic outcomes **(Ryan & Deci, 2000**).

CONCLUSION

Conclusions from Hypotheses-wise Results are presented here.

Conclusion on Hypothesis (H_1)

The results confirmed **H_1**, establishing that **cognitive, emotional, and social self-concept** jointly predicted academic motivation among adolescents when males and females were considered together. Collectively, these variables accounted for **18% of the variance**, demonstrating that self-concept is a critical determinant of students' motivational orientation. Cognitive self-concept emerged as the strongest predictor, reinforcing prior research that adolescents' perceptions of their intellectual ability substantially influence their motivational drive **(Marsh & Martin, 2011).** Emotional self-concept highlighted the role of resilience and emotional stability in sustaining motivation, while social self-concept emphasized the importance of peer acceptance and belongingness **(Ryan & Deci, 2000; Wentzel, 1998).** These findings corroborate earlier studies that link positive self-beliefs with higher engagement and persistence **(Marsh & Craven, 2006; Valentine, DuBois, & Cooper, 2004).**

Conclusion on Hypothesis (H_2)

The findings supported **H_2**, revealing that **cognitive, emotional, and aesthetic self-concept** were significant predictors of academic motivation among male students, explaining **27% of the variance**. Cognitive self-concept underscored the significance of intellectual competence, while emotional self-concept demonstrated that emotionally resilient boys are more capable of sustaining academic motivation under stress **(Bandura, 1997; Pajares, 1996).** Interestingly, aesthetic self-concept emerged as an additional predictor, suggesting that creativity, artistry, and appreciation of beauty contribute meaningfully to boys' motivational profiles **(Harter, 2012).** Similar to earlier findings, these results affirm that motivation in male adolescents is shaped not only by cognitive and emotional factors but also by creative engagement (**Bouffard et al., 2003; Zanobini & Usai, 2002).** This highlights the potential of integrating creative and expressive pedagogies to enhance motivation among male learners.

Conclusion on Hypothesis (H_3)

The analysis upheld **H_3**, showing that **cognitive and social self-concept** significantly predicted academic motivation among female students, accounting for **12% of the variance**. Cognitive self-concept, as in the previous groups, was a strong predictor, validating studies that demonstrate its role in academic persistence and achievement **(Guay, Marsh, & Boivin, 2003; Srivastava & Misra, 2007).** Additionally, the distinct contribution of social self-concept reflected the influence of peer relationships, cooperation, and interpersonal acceptance on girls' academic motivation **(Eccles & Roeser, 2011; Roeser, Eccles, & Sameroff, 2000).** This finding aligns with cultural perspectives that suggest female adolescents often draw motivation from collaborative, supportive, and socially enriching environments **(Wilgenbusch & Merrell, 1999).**

Overall Conclusion

Taken together, the results across **H_1, H_2, and H_3** affirm that **self-concept is a multidimensional and powerful predictor of academic motivation**, though its specific dimensions vary by gender. Cognitive self-concept is universally influential across groups, while emotional and aesthetic self-concepts are particularly salient for male adolescents, and social self-concept plays a more defining role for female adolescents. This underscores the **multifaceted nature of self-concept (Shavelson, Hubner, & Stanton, 1976)** and is consistent with motivational theories such as **Self-Determination Theory (Deci & Ryan, 1985)** and the **Expectancy-Value Framework (Eccles & Wigfield, 2002),** which highlight the interplay between self-beliefs and motivational behaviours.

The present study contributes evidence that adolescents with a positive self-concept exhibit higher intrinsic motivation, stronger goal-setting, and greater perseverance in academic tasks **(Harter, 2012).** These results also confirm gendered patterns of self-concept and motivation, reflecting socio-cultural influences (**Schunk & Pajares, 2009).**

From an applied perspective, the findings highlight the importance of designing **educational interventions** that enhance self-concept to foster academic motivation. Teachers, parents, and policymakers should focus on cultivating supportive classroom climates, providing positive reinforcement, and integrating mentorship and personalised learning strategies to strengthen students' self-perceptions **(Eccles & Wigfield, 2020).**

Nevertheless, the study acknowledges limitations, such as its **geographical concentration in Nadia District**, which may limit generalisability. Future research should extend this inquiry across diverse socio-cultural contexts and employ longitudinal designs to track the long-term influence of self-concept on academic motivation **(Zimmerman & Schunk, 2011).**

In conclusion, the findings reaffirm that **cognitive, emotional, social, and aesthetic dimensions of self-concept critically shape adolescents' motivation**, with gender-specific variations. By fostering self-concept through targeted educational and counselling interventions, stakeholders can meaningfully enhance academic motivation, thereby contributing to both academic success and holistic adolescent development.

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