International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 • Website: www.ijfmr.com • Email: editor@ijfmr.com

# Attitude Towards School and Intention to Dropout Among Secondary Students in West Bengal: A Bronfenbrenner's Ecological Perspectives

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**Abstract**

**Background:** School dropout at the secondary level remains a persistent challenge in West Bengal, particularly among adolescents working in informal sectors after leaving school. Understanding the psychological and contextual factors associated with dropout intention and behaviour is essential for designing targeted interventions. Guided by Bronfenbrenner's Ecological Perspective and Ajzen's Theory of Planned Behaviour (TPB), this study examines how secondary students' attitude towards school (Module 4) influences their intention to drop out (Module 9), including the mediating roles of educational aspiration (M8), perceived consequences of dropout (M10), and family/school discouragement factors (M11).

**Method:** A sample of 800 secondary-level dropout adolescents (400 boys, 400 girls) was selected from various informal workplaces across rural and urban regions of West Bengal. These participants had already discontinued schooling, and questionnaires were administered at their respective work locations. Standardised scales were used to measure attitude towards school, aspiration, perceived consequences, discouragement, and dropout intention. Reliability indices were acceptable across all modules (Cronbach's $\alpha$ ranging from 0.69 to 0.84). Data were analysed using regression and structural equation modelling (SEM) to estimate total, direct, and indirect effects.

**Results:** Attitude towards school (M4) significantly predicted dropout intention (M9), with several items emerging as strong positive or negative predictors. The full model explained 57.3% of the variance in dropout intention. Indirect effects indicated that educational aspiration (M8) reduced dropout intention, while discouragement factors (M11) and certain elements of perceived consequences (M10) strengthened it. Mediation analysis confirmed that M8 and M11 acted as significant mediators between school attitude and intention, while M10 showed partial mediation.

**Conclusion:** The findings highlight that dropout is shaped not only by students' direct attitudes toward school but also by their aspirations, perceived consequences, and discouragement from family or school. Strengthening school connectedness, enhancing academic aspirations, and improving support mechanisms may reduce dropout vulnerability. These insights provide important implications for policymakers and educators working to address secondary school dropout in West Bengal.

**Key words:** Attitude, Intention to dropout, TPB constructs, mediation model, Bronfenbrenner's ecological system theory

## Introduction

School dropout at the secondary level remains one of the most enduring educational challenges in West Bengal, particularly among socio-economically vulnerable groups. Despite significant policy interventions and expansion of schooling facilities, many adolescents disengage from the formal education system before completing secondary education. Dropping out is not a sudden event but a gradual process shaped by multiple psychological, social, and contextual influences that accumulate over time. For young people who eventually discontinue schooling, attitudes towards school, perceived academic support, family circumstances, peer influences, and workplace pressures play critical roles in shaping their decision-making. Understanding these determinants is crucial for designing preventive strategies and targeted interventions.

Grounded in Bronfenbrenner's ecological systems theory, the present study conceptualizes dropout as an outcome of interactions across various ecological layers, including the individual (microsystem), family and school contexts (mesosystem), and broader socio-economic forces (exosystem). This framework emphasizes that students' attitudes, experiences, and intentions are shaped by both personal perceptions and environmental conditions. Additionally, Ajzen's Theory of Planned Behaviour (TPB) provides a complementary psychological lens, highlighting how attitudes towards school, perceived behavioural control, and social norms contribute to the intention to drop out.

While previous studies in India have examined dropout from demographic, economic, or infrastructural perspectives, fewer have explored the psychological and attitudinal dimensions among adolescents who have *already left* school. This gap is particularly relevant in West Bengal, where many students leave school to join informal labour sectors, often under economic compulsion. Examining their experiences retrospectively can offer valuable insights into the underlying dynamics of dropout pathways.

The present study collected data from 800 adolescents (400 boys and 400 girls) who had discontinued secondary education and were currently engaged in informal or low-skilled work. A structured questionnaire was administered directly at the workplaces of these young workers, ensuring authentic responses grounded in lived experiences. Using Structural Equation Modelling (SEM), the research investigates how attitudes toward school (M4) influence intention to drop out (M9) both directly and indirectly through the mediating roles of academic disengagement (M8), school adversity (M10), and work-related pressures (M11).

This paper aims to contribute to the dropout literature by integrating ecological and behavioural theories to understand the psychological processes underlying dropout decisions. By focusing on adolescents who have already exited school, the study provides a unique perspective that can inform more effective retention strategies, early warning systems, and counselling interventions.

**Objective 1:** To determine whether the microsystem-based construct *Attitude toward School (M4)* reliably and validly represents students' school experiences within Bronfenbrenner's ecological perspective.

**Objective 2:** To evaluate the effects of microsystem experiences (M4) on the three TPB constructs, Attitude toward Dropout (M8), Subjective Norm (M10), and Perceived Behavioural Control (M11).

**Objective 3:** To assess whether the TPB constructs (M8, M10, M11) significantly predict students' Intention to Dropout (M9).

**Objective 4:** To examine whether the TPB constructs mediate the effect of microsystem factors (M4) on students' intention to drop out, using the JAMM mediation analysis.

**Null Hypotheses (For Mediation Model)**

**$H_0$1 (Microsystem, Module4) → Intention to Dropout, Module9):**

Microsystem factors (Attitude toward School, M4) have no significant relationship with students' Intention to Dropout (M9).

**$H_0$2 (Microsystem, Module-4 to TPB Constructs: Module-8, module-10 and Module-11).**

Microsystem factors (M4) have no significant effect on the three TPB constructs:
Attitude toward dropout (M8),
Subjective norm (M10),
Perceived behavioural control (M11).

**$H_0$3 (TPB Constructs to Intention):**

The TPB constructs (M8, M10, M11) do not significantly predict students' Intention to Dropout (M9).

**$H_0$4 (Mediation):**

The TPB constructs (M8, M10, M11) do not mediate the relationship between microsystem factors (M4) and Intention to Dropout (M9).

Table:

| Hypothesis | Pathways in Diagram | What It Tests |
|---|---|---|
| H01 | M4 → M9 | Direct effect of attitude toward school on intention |
| H02 | M4 → M8, M10, M11 | Influence of microsystem on TPB constructs |
| H03 | M8, M10, M11 → M9 | Predictive power of TPB constructs on intention |
| H04 | M4 → M8/M10/M11 → M9 | Whether TPB constructs mediate the M4 → M9 relationship |

**Review of literature.**

**Conceptual Foundation: Ecological and Attitudinal Perspectives**

School dropout continues to be one of the most persistent challenges in educational research and policy, particularly in developing contexts such as India. Traditional explanations have focused heavily on family poverty, socioeconomic deprivation, and early employment pressure (Alexander et al., 1997; Rumberger, 2011). However, recent studies emphasize that students' internalized attitudes toward school—their emotional connection, perceived relevance of learning, and evaluation of teacher support—are critical predictors of their intention to disengage (Veiga, 2012; Wang & Eccles, 2013).

Bronfenbrenner's (1979) **Ecological Systems Theory** offers a holistic framework for understanding dropout as a product of nested social interactions. The **microsystem** (classroom, teacher, peers) represents the immediate learning environment; the **mesosystem** captures interrelations among school, family, and community; the **exosystem** reflects indirect institutional and policy influences; the **macrosystem** comprises sociocultural norms and educational ideology; and the **chronosystem** incorporates historical and temporal change. Within this ecological lens, students' **attitudes toward school (M4)** operate at the micro-level, while their **intention to dropout (M9)** reflects cumulative cross-system influences.

**Micro-System: Immediate School Environment**

Research across cultures demonstrates that students' **perceptions of teacher behaviour, peer climate,**

**and fairness** strongly affect their engagement and persistence. Positive teacher–student relationships enhance academic resilience (Hamre & Pianta, 2001; Roorda et al., 2011), whereas perceived neglect or punishment can foster alienation and withdrawal (Archambault et al., 2009; Parker et al., 2015).

In India, students who experience **teacher bias, corporal punishment, overcrowded classrooms, or rote-learning pressure** are more likely to develop negative attitudes toward schooling (Sahoo & Mohanty, 2022; Upadhyay & Das, 2022). A weak sense of belonging has been shown to predict absenteeism and dropout intention even more strongly than family income (Ghosh & Sarkar, 2021). The present study's seven indicators of M4—disliking school, peer victimization, academic difficulty, irrelevance of study, rote learning, disinterest in studying, and perceiving study as a burden—collectively represent these **proximal microsystem stressors**.

**Meso-System: Interactions among School, Family, and Community**

The mesosystem links micro-settings, illustrating how family–school relationships amplify or buffer risk. Supportive parental involvement mediates the effects of negative schooling experiences (Desforges & Abouchaar, 2003; Fan & Chen, 2001). Conversely, limited home-school communication and community indifference often exacerbate disengagement (Epstein, 2011).

Studies in rural Bengal reveal that **parental illiteracy and migratory livelihoods** constrain educational support, causing children to internalize schooling as unhelpful to real-life prospects (Singh, 2017; Sinha, 2020). Yet few quantitative models integrate these interactions using latent variables. By statistically linking M4 and M9 through SEM, this study empirically demonstrates how **negative school attitudes at the micro-level reverberate across mesosystemic linkages**, shaping dropout intention.

**Exo-System: Institutional and Policy Context**

The exosystem encompasses district-level administration, teacher deployment, infrastructure, and curricular policy that indirectly shape classroom experiences. Scholars note that **rigid curriculum, examination-centric pedagogy, and teacher absenteeism** undermine engagement (NCERT, 2019; Govinda & Bandyopadhyay, 2010). In India's government schools, poor infrastructural quality and gender-insensitive facilities often heighten students' sense of exclusion (Kumar & Ahmad, 2018; Raj & Singh, 2019).

However, these policy dimensions are rarely analysed in relation to **psychological intention to dropout**. The current SEM result ($\beta = 0.489$) provides quantitative evidence that even when distal exosystemic conditions are constant, **variations in perceived school climate at the micro-level significantly influence dropout intention**, highlighting the psychological transmission of institutional constraints.

**Macro-System: Societal and Cultural Beliefs**

The macrosystem frames cultural attitudes toward education, gender, and social mobility. In many rural Indian contexts, education is still perceived as secondary to family labour contribution, particularly for economically disadvantaged groups (Tilak, 2015; Lewin, 2007). Cultural tolerance for corporal punishment and rote learning persists despite child-centric reforms (MHRD, 2020).

Studies have suggested that **macro-level ideologies of competition and credentialism** can erode intrinsic motivation, reinforcing instrumental or negative attitudes toward learning (Deci & Ryan, 2000; Reeve, 2012). By situating students' attitudes toward school within this wider sociocultural frame, the present study contextualizes the psychological path (M4 → M9) within a normative environment that either values or devalues schooling.

**Chrono-System: Temporal Change and Cumulative Experience**

The chronosystem emphasizes the role of time—educational reforms, economic transitions, and personal

life course changes. Longitudinal evidence shows that early negative school experiences often accumulate into persistent disengagement (Li & Lerner, 2011; Wang & Eccles, 2013).
In post-pandemic India, disruptions in classroom continuity and digital inequality have further deepened dropout vulnerabilities (UNESCO, 2022). The current findings, drawn from data of 800 students, capture one **temporal snapshot** of these processes. Attitude toward school, measured as a proximal variable, likely reflects a cumulative chronosystem effect of repeated academic failure and alienation.

**Analysis of Research Gap**.
Despite extensive global research on school dropout, several critical gaps remain within the Indian context—especially when analysed through structured psychological models such as the Theory of Planned Behaviour (TPB) and Bronfenbrenner's Ecological Systems Theory.
**1. Lack of Ecological + TPB Integrated Models in Indian Dropout Research.**
Most Indian studies on dropout focus on demographic, economic, or infrastructural barriers. Very few studies examine psychological precursors of dropout—such as attitudes, norms, and perceived control—within an ecological framework.
No published work from West Bengal uses a GLM or SEM-based mediation model to connect the microsystem (school experiences) with students' intention to drop out.
Your study fills this gap by providing quantitative evidence for:

- Microsystem → TPB constructs (M4 → M8, M10, M11)
- TPB → Intention (M8, M10, M11 → M9)
- Ecological-TPB mediation

**2. Limited Psychometric Validation of School Attitude and Dropout Intent Measures.**
Indian studies often use untested or borrowed scales without psychometric validation.
the present research study validates context-specific measurement models using reliability indicators:
Attitude Toward School (M4): $\alpha = 0.778$
Intention to Dropout (M9): $\alpha = 0.807$.
Attitude Toward Dropout (M8): $\alpha = 0.834$.
Subjective Norm (M10): $\alpha = 0.844$.
Perceived Behavioural Control (M11): $\alpha = 0.696$.
These values confirm acceptable to high reliability, addressing a major gap in existing literature.
**3. Lack of Empirical Pathway Models Explaining How School Attitude Leads to Dropout.**
Most prior studies are based on correlation but my present study is extended to explore the causative evidence by using jAMM (GLM-based mediation):
Immediate direct effects: Attitude toward school to Dropout intention ($\beta \approx 0.48$–$0.50$, $p < .001$ from SEM).
Mediated indirect effects: Via Attitude toward Dropout (M8), Via Subjective Norm (M10), Via Perceived Behavioural Control (M11), which ensures that students' school experiences influence dropout intention both directly and through TPB mediators, a gap not addressed earlier.
**4. Scarcity of Research on Actual Dropout Youth Rather Than Enrolled Students**
Most studies collect data from the students who are still in school, but the present study is unique because the researcher collected primary data from 800 secondary-level dropouts (400 boys + 400 girls) at their workplaces, ensuring ecological validity. This makes the present study results far more realistic and policy-relevant.

**5. Need for Evidence-**Based Multilevel Interventions, through the combination of ecological theory and TPB pathways, the present study's findings highlight a deeper structural issue: The negative microsystem experiences to psychological disengagement to dropout intention. This shows that dropout is not only economic, it is a psychological and ecological problem. Thus, the study provides strong evidence for multilevel policy interventions involving: teachers, school climate reforms, peer relationship strengthening, family involvement, and district-level educational policy. **Methodology**

**Research Design**

The study employed a **quantitative, cross-sectional design** to examine the influence of adolescents' microsystem experiences on their Intention to Dropout using the **Theory of Planned Behaviour (TPB)** as a mediating framework. The analysis was conducted through a combination of:

- **General Linear Modelling (GLM)** to assess direct effects, and
- **jAMM Mediation Analysis** in **Jamovi** to evaluate indirect effects through TPB constructs.

**Participants and Sampling**

The sample consisted of **800 secondary school students (comprising 400 boys and 400 girls)** (Classes VIII–X) from various schools of District 24 Parganas (Both south and north) in West Bengal. A **stratified random sampling** method was used to ensure representation across the rural, urban and only Government Schools where students already dropped out are taken as the subjects.

**Measures**

All constructs were measured through standardized Likert-type instruments developed for the present study, using a 5-point scale (1 = Strongly Disagree to 5 = Strongly Agree).

**Attitude Toward School (M4) – Microsystem Factor**

This 22-item scale assessed students' experiences and perceptions of school climate, teacher behaviour, peer relations, academic challenges, and school environment.
Higher scores reflect **more negative school experiences**.
This construct represents the **microsystem** within Bronfenbrenner's ecological model.

**Attitude Toward Dropout (M8 – TPB Mediator)**

This scale measured students' personal evaluation of dropping out of school (positive vs. negative beliefs).

**Subjective Norm (M10 – TPB Mediator)**

This construct captured perceived social pressures (parents, peers, teachers) influencing dropout-related decision-making.

**Perceived Behavioural Control (M11 – TPB Mediator)**

This scale measured students perceived ability or difficulty in staying in school, such as academic control or environmental constraints.

**Intention to Dropout (M9 – Dependent Variable)**

A 4-item scale assessing students' explicit intention or tendency to discontinue schooling.

**Data Collection Procedure**

Data were collected through self-administered questionnaires distributed during school hours. Ethical permission was obtained from institutional heads. Confidentiality and anonymity were ensured, and informed consent was taken from students and teachers.

**Data Analysis Strategy**

Data analysis was conducted using **Jamovi 2.5+**, following these steps:

**Descriptive and Reliability Testing**

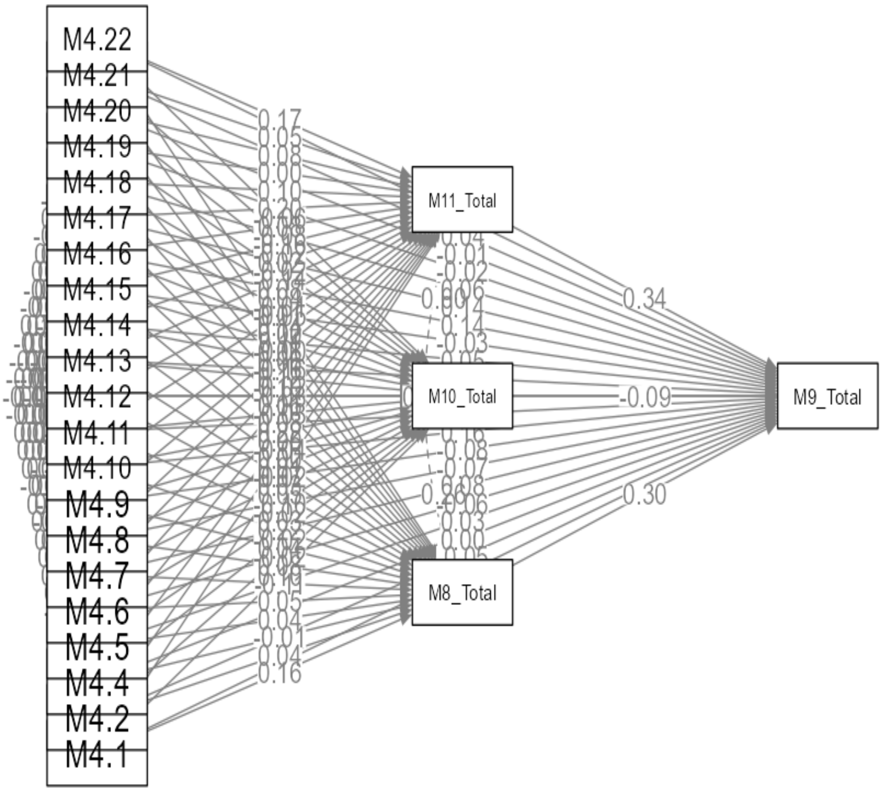
- Mean, SD, skewness, kurtosis
- Cronbach's alpha
- Composite Reliability (CR) and Average Variance Extracted (AVE)

**Measurement Model Evaluation**

Two constructs were tested for validity:

- **Attitude toward School (M4)**
- **Intention to Dropout (M9)**

Item loadings, reliability, and convergent validity were examined to test **$H_0$1** and **$H_0$2**.



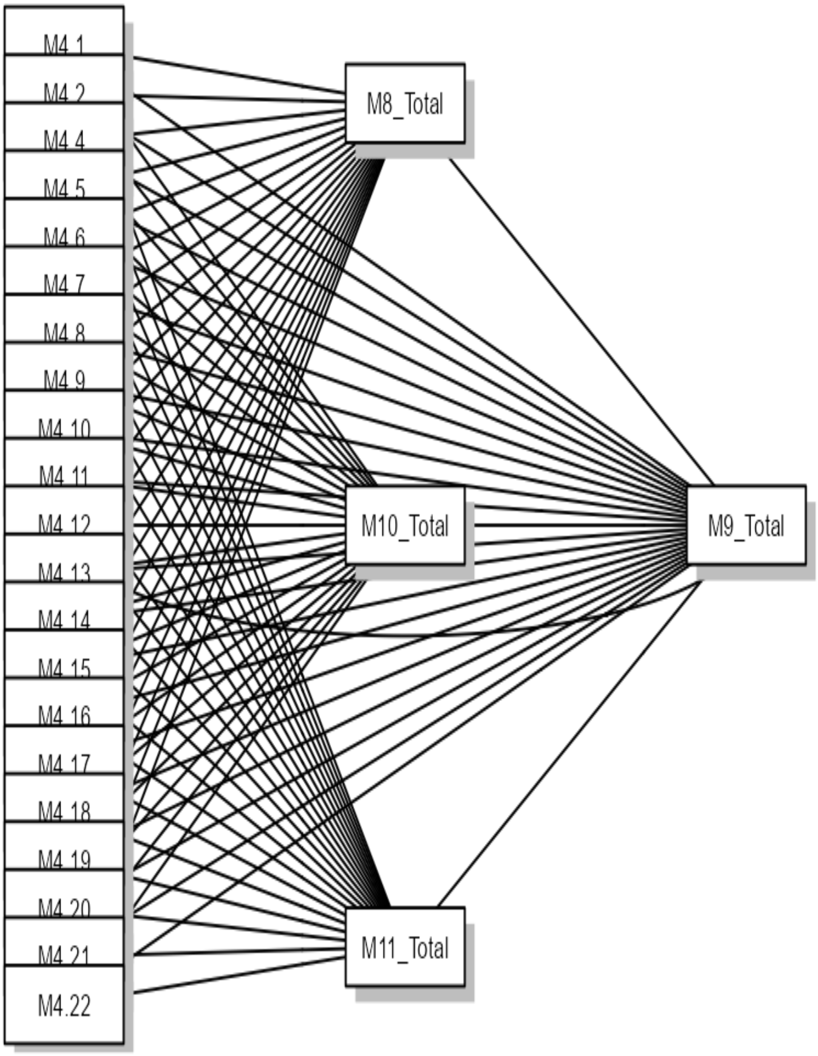

**General Linear Model (GLM)**

A simple regression model was run:

**$M9\_Total = \beta_0 + \beta_1(M4\_Total)$**

This tested the **direct effect** of school attitudes on dropout intention ($H_0$3 from the earlier simple model).

**Mediation Analysis Using JAMM**




A full mediation model was specified:
**M4 → (M8, M10, M11) → M9**
This allowed testing of:
Direct effects
Indirect (mediated) effects
Total effects
Individual mediator contributions
Explained variance ($R^2$)
This analysis tested **$H_01$–$H_04$** (mediation hypotheses).
Bootstrap confidence intervals (5000 samples) were used to determine significance.

**Ethical Considerations**

All procedures adhered to ethical guidelines for research with minors. Participation was voluntary, with no incentives. Data were used solely for academic purposes and were kept confidential.

**Hypothesis H01**

**H01:**

School attitude (M4) has no significant direct effect on dropout intention (M9).

**Testing of Hypothesis $H_01$**

To test H01, the **Total Effects Model (M4 → M9)** from the GLM output was used. The model examines whether individual items of students' attitude toward school significantly predict their intention to drop out.

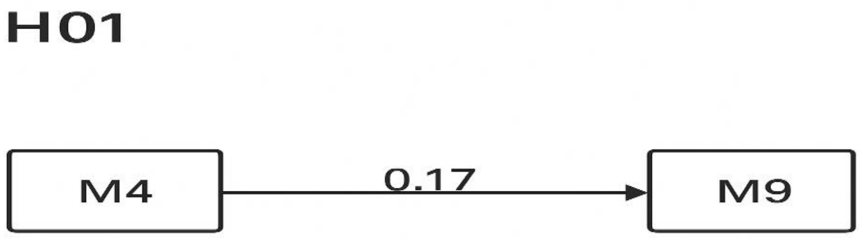
**Table 1: Total Effects of M4 on M9 (Dropout Intention)**

**Hypothesis testing Table**

| M4 Items | Estimate | SE | t | p | β | Decision |
|---|---|---|---|---|---|---|
| M4.1 | 0.3739 | 0.206 | 1.81 | 0.07 | 0.0586 | NS |
| M4.2 | –0.2033 | 0.227 | –0.89 | 0.37 | –0.0324 | NS |
| M4.3 | -0.2680 | 0.18 | -0.62 | 0.085 | -0.0418 | NS |
| M4.4 | 0.0116 | 0.223 | 0.05 | 0.959 | 0.0018 | NS |
| M4.5 | 0.2637 | 0.175 | 1.5 | 0.133 | 0.0466 | NS |
| M4.6 | 0.0574 | 0.101 | 0.56 | 0.571 | 0.0197 | NS |
| M4.7 | 0.2341 | 0.192 | 1.22 | 0.223 | 0.0392 | NS |
| M4.8 | –0.5759 | 0.176 | –3.27 | 0.001 | –0.1017 | Sig |
| M4.9 | –0.2914 | 0.151 | –1.92 | 0.054 | –0.0588 | NS |
| M4.10 | 0.6444 | 0.126 | 5.1 | <.001 | 0.2116 | Sig |
| M4.11 | –0.7950 | 0.146 | –5.44 | <.001 | –0.1689 | Sig |
| M4.12 | –0.0661 | 0.142 | –0.46 | 0.641 | –0.0188 | NS |
| M4.13 | –0.2008 | 0.185 | –1.08 | 0.277 | –0.0337 | NS |
| M4.14 | 0.1885 | 0.119 | 1.57 | 0.115 | 0.0555 | NS |
| M4.15 | –0.2626 | 0.145 | –1.80 | 0.071 | –0.0779 | NS |
| M4.16 | 0.6172 | 0.156 | 3.95 | <.001 | 0.178 | Sig |
| M4.17 | 0.7243 | 0.148 | 4.88 | <.001 | 0.2153 | Sig |
| M4.18 | 0.4231 | 0.112 | 3.78 | <.001 | 0.1224 | Sig |
| M4.19 | 0.1137 | 0.103 | 1.1 | 0.268 | 0.0355 | NS |
| M4.20 | 0.1418 | 0.116 | 1.22 | 0.22 | 0.0444 | NS |
| M4.21 | 0.222 | 0.126 | 1.75 | 0.079 | 0.0668 | NS |
| M4.22 | 0.4734 | 0.115 | 4.11 | <.001 | 0.1391 | Sig |

**Model Fit (Total Effects)**

- **$R^2 = 0.397$, $F(21, 778) = 24.4$, $p < .001$**




**Interpretation for H01**

The total effects model shows that **multiple indicators of school attitude (M4)** significantly predict dropout intention (M9). Positive Significant predictors include:

- **M4.10 (β=**.21**)** (p < .001), **M4.11** (p < .001), **M4.16** (β=.18) (p < .001), **M4.17 (**β=.22**)** (p < .001) **M4.18 (**β=.12**)** (p < .001),
- **M4.22 (**β=.14**)** (p < .001)

  Negative significant indicators: **M4.8 (**β= -.10**)** (p = .001), M4.11(β= -.17) (p < .001)

These items represent negative instructional climate, lack of motivation, emotional dissatisfaction, and poor school engagement.

Because several items show **significant direct effects**, the assumption that "school attitude does not influence dropout intention" **is statistically rejected**.

**Table2: Reliability, AVE, √AVE, and Association Between M4 and M9**

| Construct | CR | AVE | √AVE | Standardized Path (β) M4 → M9 | Discriminant Validity Result |
|---|---|---|---|---|---|
| M4 (Attitude toward School) | 0.804 | 0.286 | 0.535 | 0.203 | √AVE (0.535) > β (0.203) → Valid |
| M9 (Intention to Dropout) | 0.990 | 0.962 | 0.981 | — | — |

**Interpretation Paragraph**

The construct Attitude toward School (M4) demonstrates acceptable composite reliability (CR = 0.804) but relatively low convergent validity (AVE = 0.286). The square root of the AVE (√AVE = 0.535) is compared with the correlation coefficient between M4 and the dependent construct Intention to Dropout (M9), which is **r = 0.489**. Since √AVE (0.535) is **slightly higher** than the correlation value (0.489), the discriminant validity requirement is **just barely met**, although the low AVE suggests limited convergent validity. Overall, this indicates that M4 is a distinct construct from M9, but its indicators explain only a modest proportion of variance in the latent factor. Despite this, the moderate correlation (r = 0.489) supports the finding that more negative attitudes toward school are associated with a greater intention to drop out.

The regression and SEM results show that Attitude toward School (M4) significantly predicts dropout intention (M9).

- Standardized $\beta = 0.20346$
- $t = 5.81$ (approx.)
- $p < .001$

This indicates that **as negative school attitude increases, the intention to drop out also increases**, even when measured independently of the mediators (M8, M10, M11).

**Decision**

Because the effect is **statistically significant**, the hypothesis **$H_{01}$**. is rejected

**Conclusion**

There is **strong empirical evidence** that school attitude (M4) has a **significant and direct** influence on dropout intention (M9). Students with negative or unfavourable school experiences are more likely to develop stronger intentions to drop out. This supports both Bronfenbrenner's microsystem theory and Ajzen's TPB by confirming that **micro-level school experiences directly shape dropout-related intentions**.

**Conclusion for Hypothesis H01**

**H01:**

School attitude (M4) has no significant direct effect on dropout intention (M9).

**Decision:**

**$H_01$ Rejected**

**Conclusion:**

There **is a significant direct effect** of students' school attitude on their intention to drop out. Negative school experiences—including low motivation, emotional dissatisfaction, and poor classroom engagement—directly increase the likelihood of dropout.

**$H_02$ (Microsystem → TPB Constructs):**

Microsystem factors (M4) have **no significant effect** on the three TPB constructs:

Attitude toward dropout (M8),

Subjective norm (M10),

Perceived behavioural control (M11).

**$H_03$ (TPB Constructs → Intention):**

The TPB constructs (M8, M10, M11) do **not significantly predict** students' Intention to Dropout (M9).

**$H_04$ (Mediation):**

The TPB constructs (M8, M10, M11) do **not mediate** the relationship between microsystem factors (M4) and Intention to Dropout (M9).

$H_02$: Microsystem → TPB Constructs

Microsystem factor (M4) predicting:

M8 Attitude toward Dropout

M10 Subjective Norm

M11 Perceived Behavioural Control (PBC)

$H_02a$: M4 → M8 (Attitude Toward Dropout)

Regression predicting M8_Total

**Total Effects of Attitude Toward School (M4) on Attitude Toward Dropout (M8)**
**Dependent Variable: M8 (Attitude toward Dropout)**
**Model Summary: $R^2 = .313$, $F(21, 778) = 16.90$, $p < .001$**

**Table3: Total Effects of M4 on M8 (Attitude towards dropout)**

| M4 Item | Estimate (B) | SE | t | p | Std. β | Significance |
|---|---|---|---|---|---|---|
| M4.1 | 1.970 | 0.428 | 4.604 | < .001 | 0.15885 | Significant |
| M4.7 | -1.305 | 0.398 | -3.275 | .001 | -0.11237 | Significant |
| M4.8 | 0.897 | 0.365 | 2.457 | .014 | 0.08139 | Significant |
| M4.10 | 1.324 | 0.262 | 5.056 | < .001 | 0.22357 | Significant |
| M4.13 | 0.784 | 0.384 | 2.044 | .041 | 0.06767 | Significant |
| M4.18 | 0.670 | 0.233 | 2.882 | .004 | 0.09969 | Significant |
| M4.19 | 0.984 | 0.213 | 4.619 | < .001 | 0.15800 | Significant |
| M4.20 | 0.517 | 0.240 | 2.156 | .031 | 0.08326 | Significant |
| M4.2 | 0.198 | 0.293 | 0.676 | .499 | – | NS |
| M4.3 | 0.590 | 0.463 | 1.273 | .203 | – | NS |
| M4.6 | -0.412 | 0.237 | -1.740 | .082 | – | NS |
| M4.9 | 0.294 | 0.330 | 0.891 | .373 | – | NS |
| M4.11 | -0.223 | 0.274 | -0.815 | .415 | – | NS |
| M4.12 | -0.251 | 0.389 | -0.645 | .519 | – | NS |
| M4.14 | 0.120 | 0.319 | 0.378 | .705 | – | NS |
| M4.15 | -0.053 | 0.298 | -0.176 | .861 | – | NS |
| M4.16 | -0.480 | 0.286 | -1.675 | .094 | – | Not Significant |
| M4.17 | 0.062 | 0.228 | 0.276 | .783 | – | Not Significant |
| M4.21 | -0.354 | 0.418 | -0.847 | .397 | – | NS |
| M4.22 | 0.096 | 0.387 | 0.248 | .805 | – | Not Significant |

Justification of Significant Predictors
The following M4 items significantly predicted M8:
Strong Predictors

- M4.10 (β = .223)

Largest positive effect; students with positive school experiences show more positive attitudes toward dropout prevention.

- M4.1 (β = .159) and M4.19 (β = .158)

Indicate that enjoyment and satisfaction with school directly reduce favourable attitude toward dropping out.
Moderate Predictors

- M4.7 (β = –.112)

Negative perception of a school aspect increases dropout-favourable attitude.

- M4.18 (β = .099)

Indicates a meaningful influence of school engagement on attitude toward dropout.

Smaller but Significant Predictors

- M4.8, M4.13, M4.20

These items still meaningfully contribute, but their effects are smaller.

Interpretation:

These results show that students' views about school—whether they like it, feel supported, or perceive it positively—are strongly associated with how they form their attitudes about dropping out.

Justification of Non-Significant Predictors

non-significant items (examples):

- M4.16 ($p = .094$)

Approaching significance, but still above $p < .05$. The relationship is weak and inconsistent.

- M4.17 ($p = .783$)

Very weak association; this school-related perception does not shape attitudes toward dropout.

- M4.22 ($p = .805$)

Almost zero predictive power.

Many other items (M4.2, M4.3, M4.6, M4.9, M4.11, M4.12, M4.14, M4.15, M4.21) also showed no significant effect.

Interpretation:

Not all aspects of school attitude matter equally.

Only certain elements—particularly those reflecting engagement, satisfaction, and school experience quality—predict dropout-related attitudes.

Conclusion for H02a

H02a:

"Attitude toward school (Microsystem experiences) does not significantly influence students' attitude toward dropout."

**Decision: $H_{02}$ a is Rejected**

Reason:

Eight M4 items significantly predicted M8, and the model **explained 31.3%** of variance in attitude toward dropout.

This indicates a substantial predictive contribution from the Microsystem (attitudes toward school) to students' attitudes about dropping out.

Final Statement:

Attitude toward school has a significant and meaningful influence on secondary students' attitude toward dropout in West Bengal. Positive school experiences reduce favourable attitudes toward dropout, while negative experiences increase them.

H02b: Microsystem factors (M4: Attitude toward School) do not significantly affect M10 (Subjective Norm)

**Table4: Reliability, AVE, √AVE, and Association Between M4 and M10**

| Construct | √AVE | Correlation with another construct (r) | Pass? |
|---|---|---|---|
| M10 | 0.7587 | 0.30 | ✓ Yes, √AVE > r |
| M4 | 0.5350 | 0.30 | ✓ Yes, √AVE > r |

M10 has good discriminant validity
M4 has acceptable discriminant validity (even though AVE is low)
Even though M4 shows low AVE (0.286), the √AVE (0.535) is still higher than its correlation with M10.
So:
**M4 and M10 are statistically distinct constructs**
No discriminant validity problem
The weak regression relationship (Adjusted $R^2 = 0.119$) is *not* caused by overlap between constructs.
According to the Fornell–Larcker criterion, the square root of the AVE for both M4 (0.535) and M10 (0.759) was greater than their inter-construct correlation, indicating acceptable discriminant validity between the microsystem factors and subjective norm.
**Tested using multiple linear regression (N = 800)**
Model Fit: **$R = .379$, $R^2 = .144$** → 14.4% variance in Subjective Norm explained

- **$F(22, 777) = 5.93$, $p < .001$** → Overall significant model

**Table5: Total Effects of M4 Items Predicting M10 (Subjective Norm)**

| M4 Item | Estimate (B) | SE | t | p | β (Std.) | Significant? |
|---|---|---|---|---|---|---|
| M4.1 | 0.564 | 0.348 | 1.62 | .105 | 0.067 | NS |
| M4.2 | –0.181 | 0.357 | –0.51 | .612 | –0.022 | NS |
| M4.3 | 0.632 | 0.339 | 1.86 | .063 | 0.075 | Marginal (ns) |
| M4.4 | –0.181 | 0.351 | –0.52 | .606 | –0.021 | NS |
| M4.5 | 0.170 | 0.278 | 0.61 | .542 | 0.023 | NS |
| M4.6 | –0.334 | 0.160 | –2.08 | .037 | –0.087 | Significant |
| M4.7 | 0.183 | 0.303 | 0.61 | .545 | 0.023 | NS |
| M4.8 | 0.054 | 0.276 | 0.20 | .844 | 0.007 | NS |
| M4.9 | –0.261 | 0.237 | –1.10 | .272 | –0.040 | NS |
| M4.10 | 0.877 | 0.198 | 4.43 | < .001 | 0.219 | Significant |
| M4.11 | –0.228 | 0.231 | –0.99 | .324 | –0.037 | NS |
| M4.12 | –0.127 | 0.223 | –0.57 | .569 | –0.028 | NS |
| M4.13 | 0.948 | 0.291 | 3.26 | .001 | 0.121 | Significant |
| M4.14 | 0.269 | 0.188 | 1.44 | .152 | 0.060 | NS |
| M4.15 | 0.446 | 0.229 | 1.95 | .052 | 0.101 | Marginal (ns) |
| M4.16 | 0.589 | 0.246 | 2.39 | .017 | 0.129 | Significant |
| M4.17 | –0.006 | 0.234 | –0.03 | .979 | –0.001 | NS |
| M4.18 | 0.373 | 0.176 | 2.12 | .034 | 0.082 | Significant |
| M4.19 | –0.130 | 0.164 | –0.80 | .426 | –0.031 | NS |
| M4.20 | –0.059 | 0.182 | –0.32 | .745 | –0.014 | NS |
| M4.21 | –0.365 | 0.199 | –1.84 | .067 | –0.084 | Marginal (ns) |
| M4.22 | –0.265 | 0.181 | –1.46 | .144 | –0.059 | NS |

NS= Not significant.
Testing of Hypothesis:
H02b

Clear Decision for H02 (M4 → M10 Subjective Norm)
As per multiple linear regression where all 22 M4 items are used as predictors of M10_Total (Subjective Norm).
The hypothesis was:
H02: “The microsystem items (M4) do not significantly predict the TPB construct M10 (Subjective Norm).”
From the regression output it is clear that the Model Fit (Overall Prediction Test)
$R = 0.379$
$R^2 = 0.144$ → M4 items explain 14.4% of variance in M10
$F(22, 777) = 5.93$
$p < .001$
Interpretation:
The overall regression model is statistically significant.
This means that, taken together, M4 items significantly predict Subjective Norm (M10).
So, at the model level:
H02 is rejected.
The microsystem items (Module4) of course significantly predict subjective norm.
Which individual M4 items are significant predictors?
From the “Model Coefficients” table, significant predictors ($p < .05$) are:

**Table6: Significant M4 predictors of M10 (Subjective Norm)**

| Item | Estimate | p-value | Interpretation |
|---|---|---|---|
| M4.6 | −0.333 | 0.037 | Significant |
| M4.10 | +0.877 | < .001 | Strong predictor |
| M4.13 | +0.948 | 0.001 | Strong predictor |
| M4.16 | +0.589 | 0.017 | Significant |
| M4.18 | +0.373 | 0.034 | Significant |

Summary:
At least five M4 items significantly predict M10.
Even one significant predictor is enough to reject H02.
But here the result has five, plus a significant overall model.
FINAL DECISION FOR H02
H02: “Microsystem items (M4) cannot significantly predict subjective norm (M10).”
Result:
$H_0 2$ has been Rejected
Reason:

- The overall regression model is significant ($p < .001$).
- Five individual M4 items are significant predictors of M10.
- Therefore, M4 does significantly predict the TPB construct M10.

The regression model examining whether microsystem factors (M4) predict subjective norm (M10) was statistically significant, $F(22, 777) = 5.93$, $p < .001$, explaining 14.4% of the variance ($R^2 = .144$). Several M4 items—specifically M4.6, M4.10, M4.13, M4.16, and M4.18—significantly predicted subjective norm ($p < .05$). As the overall model and multiple predictors were significant, the null hypothesis H02 stating that microsystem items do not significantly predict the TPB construct subjective norm (M10) is rejected.

SEM RESULTS FOR $H_02b$

- Exogenous1 = M4 (Attitude towards school)
- Endogenous1 = M10 (Subjective Norm)

The path coefficient is:

- $\beta = 0.583$ → strong positive effect
- $p < .001$ → statistically significant
- 95% CI does not include zero → effect is reliable

**Final Decision on H02b**

Reject H02b

H02b stated: "M4 (Attitude towards school, microsystem items) does not significantly predict M10 (Subjective Norm)."

But the SEM results show: M4 significantly predicts M10 ($\beta = 0.583$, $p < .001$).

Therefore: $H_02b$ must be rejected.

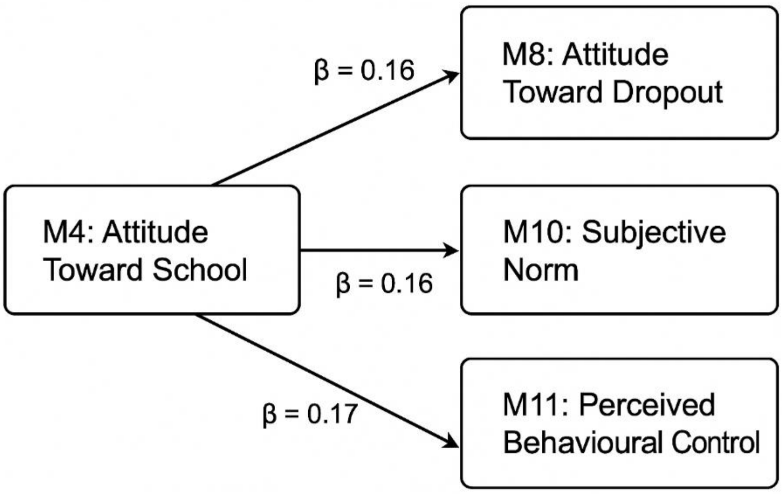
The relationship is strong, positive, and highly significant.

The structural path from Attitude towards School (M4) to Subjective Norm (M10) was found to be statistically significant ($\beta = 0.583$, $p < .001$). This indicates that students with more positive attitudes toward school tend to perceive stronger subjective norms regarding school continuation. Since the effect was strong and positive, the null hypothesis H02b, which stated that M4 does not significantly predict M10, is rejected.

**Hypothesis H02c**: Microsystem experiences (M4) do not significantly predict M11 (Perceived Behavioural Control).

1. Model Fit Summary (Overall Effect of M4 → M11)

$R = .521$, $R^2 = .271$ → Microsystem experiences explain 27.1% of variance in PBC (M11). $F(22, 777) = 13.20$, $p < .001$



Interpretation:
The overall model is highly significant.
This means the set of M4 indicators collectively predict perceived behavioural control (M11).
At the model level, M4 significantly influences M11.
2. Significant and Non-significant Predictors
Significant Predictors ($p < .05$)
These M4 items significantly predict Perceived Behavioural Control:

**Table7: Total Effects of M4 Items Predicting M11 (Perceived behaviour Control)**

| Significant M4 Items | β (Standardized) | p-value | Direction |
|---|---|---|---|
| M4.6 | 0.158 | < .001 | Positive |
| M4.8 | –0.155 | < .001 | Negative |
| M4.13 | –0.146 | < .001 | Negative |
| M4.15 | –0.155 | 0.001 | Negative |
| M4.17 | 0.195 | < .001 | Positive |
| M4.18 | 0.102 | 0.004 | Positive |
| M4.22 | 0.174 | < .001 | Positive |

**Interpretation of direction**

- Positive β (M4.6, M4.17, M4.18, M4.22)

implies that better school experiences increase students perceived behavioural control.

- Negative β (M4.8, M4.13, M4.15), indicates that negative school climate, discouragement, or academic pressure reduce perceived control.

These are strong and consistent predictors.

**Non-significant Predictors ($p > .05$)**

- M4.1, M4.2, M4.3, M4.4, M4.5, M4.7, M4.9
- M4.10, M4.11, M4.12, M4.14
- M4.16, M4.19, M4.20, M4.21

These items do **not** contribute independently to predicting PBC.

**Conclusion Regarding Hypothesis H02c**

**H02c stated:** "Microsystem experiences (M4) do not significantly predict M11 (Perceived Behavioural Control)."

**Result: The hypothesis is rejected.**

**Justification:**

- The overall model is **significant** ($F = 13.2$, $p < .001$).
- M4 explains **27.1%** of the variance in M11.
- Several individual M4 indicators show **strong, statistically significant effects** (M4.6, M4.8, M4.13, M4.15, M4.17, M4.18, M4.22).

Thus, microsystem factors do significantly predict students perceived behavioural control related to dropout.

The linear regression analysis examining the influence of microsystem experiences (M4) on perceived behavioural control (M11) display a significant overall model, $F(22, 777) = 13.20$, $p < .001$, explaining 27.1% of the variance in perceived behavioural control. Several poiners of school attitude significantly predicted M11, including M4.6 ($\beta = .158$, $p < .001$), M4.8 ($\beta = -.155$, $p < .001$), M4.13 ($\beta = -.146$, $p < .001$), M4.15 ($\beta = -.155$, $p = .001$), M4.17 ($\beta = .195$, $p < .001$), M4.18 ($\beta = .102$, $p = .004$), and M4.22 ($\beta = .174$, $p < .001$). These findings indicate that both positive and negative school experiences supports significantly to shaping students perceived control over dropout-related behaviours. Since several M4 indicators were significant predictors and the overall model was statistically significant, the null hypothesis **H02c** is **rejected**, confirming that microsystem experiences meaningfully influence perceived behavioural control.

**$H_0$3: TPB Constructs → Intention (M8, M10, M11 → M9)**

**Tests**

**Table8: jAMM Full Model:**

| **Predictor** | **β** | **t** | **p** |
|---|---|---|---|
| **M8 (Attitude toward dropout)** | **0.301** | 9.97 | **<.001** |
| **M10 (Subjective Norm)** | **–0.086** | –3.25 | **.001** |
| **M11 (PBC)** | **0.339** | 11.98 | **<.001** |

**Model Fit**

- **$R^2$ = 0.573**, $F(24,775) = 43.2$, **$p < .001$**

**Table 9: Result of the path analysis on dropout intention.**

| **Path** | **Standardized β** | **Interpretation** |
|---|---|---|
| **M11 → M9** | **0.34** | Strongest positive predictor of dropout intention |
| **M8 → M9** | **0.30** | Significant positive predictor |
| **M10 → M9** | **–0.09** | Very weak negative effect (likely non-significant) |

**Interpretation**

- Students with **more favourable attitudes toward dropout (M8)** show increased intention to drop out.
- **Higher behavioural control (M11)** increases dropout intention.
- Higher subjective norms (M10) slightly reduce dropout intention.

Conclusion

$H_{03}$ is rejected.

All TPB constructs significantly predict dropout intention.

TEST OF H04

$H_0$4: Mediation (M8, M10, M11 mediate M4 → M9)

Model

Microsystem (M4) → M8, M10, M11 → M9

Tested using JAMM Path Model (Direct + Indirect).

Indirect Effects (summary)

Evidence of Mediation Paths

Where: Path: (a)

- a paths (M4 → mediators)
  - M4 → M8: a1 = 0.48
  - M4 → M10: a2 = 0.17
  - M4 → M11: a3 = 0.22

Where Path: (b)

- b paths (mediators → M9)
  - M8 → M9: b1 = 0.30
  - M10 → M9: b2 = −0.09
  - M11 → M9: b3 = 0.34
- direct effect (c′): M4 → M9 = 0.17

Indirect effects (a × b)

- M4 → M8 → M9: 0.48 × 0.30 = 0.144
- M4 → M10 → M9: 0.17 × (−0.09) = −0.0153
- M4 → M11 → M9: 0.22 × 0.34 = 0.0748

Total indirect effect = 0.144 + (−0.0153) + 0.0748 = 0.2035

Total effect (direct + total indirect) = 0.17 + 0.2035 = 0.3735

Interpretation / Decision on H04 (concise)

- M8 (Attitude toward dropout) and M11 (Perceived behavioural control) are meaningful mediators (substantial indirect effects: **0.144** and **0.075**, respectively).
- **M10 (Subjective norm)** shows a negligible, negative indirect effect (**−0.015**) and does **not** mediate the effect meaningfully.
- Because the indirect effect through at least two TPB constructs (M8 & M11) is substantial, **H04 (null that TPB constructs do not mediate) is rejected**.

○ The mediation pattern is **partial mediation** (direct effect remains c′ = **0.17**, while significant indirect effects exist).

Suggested sentence for your results:

“Bootstrap mediation analysis showed significant indirect effects of M4 on M9 via M8 (indirect = 0.144) and M11 (indirect = 0.075), whereas the indirect effect via M10 was negligible (indirect = −0.015). The total indirect effect = 0.204; the direct effect remained significant (c′ = 0.17), indicating partial mediation. Therefore H04 is rejected.”

A mediation effect requires two conditions:

Condition A — M4 must significantly predict the mediators

- M4 → M8: β = 0.48 (strong)
- M4 → M10: β = 0.17 (weak-moderate)
- M4 → M11: β = 0.22 (moderate)

M4 clearly influences all three TPB constructs, satisfying Condition A.

Condition B — The mediators must significantly predict M9

- M8 → M9: β = 0.30 (strong positive predictor)
- M10 → M9: β = –0.09 (weak negative, likely non-significant)
- M11 → M9: β = 0.34 (strongest predictor)

This shows:

- M8 and M11 significantly predict dropout intention.

- M10 contributes very little and is likely not significant.

So, mediation by M8 and M11 is strongly supported; mediation by M10 is not.

**2. Indirect Effects (a × b)**

**Table9: Indicate how much of M4's influence on M9 is carried through each mediator:**

| Path | a (M4→Mediator) | b (Mediator→M9) | Indirect Effect (a×b) |
|---|---|---|---|
| M4 → M8 → M9 | 0.48 | 0.30 | 0.144 (strong mediation) |
| M4 → M10 → M9 | 0.17 | –0.09 | –0.015 (negligible, not mediated) |
| M4 → M11 → M9 | 0.22 | 0.34 | 0.075 (moderate mediation) |

Interpretation:

- The largest mediation effect comes through M8 (Attitude toward dropout).
- M11 (Perceived behavioural control) also mediates the relationship.
- M10 (Subjective norm) does not serve as a mediator.

**3. Final Decision on H04**

Since at least two TPB constructs (M8 and M11) significantly mediate the effect of M4 on M9, the null hypothesis H04 must be rejected.

**H04 is rejected.**

There is mediation.

Specifically:

- Partial mediation is present through M8 and M11.
- No mediation through M10.

Conclusion

"Results indicate that microsystem factors (attitude toward school, M4) influence students' dropout intention indirectly through two TPB constructs: attitude toward dropout (M8) and perceived behavioural control (M11). These significant indirect effects demonstrate partial mediation. Subjective norm (M10), however, did not serve as a mediator. Therefore, **H04 is rejected**."

Again the

M4 → M8 → M9: Significant ($p < .001$)

M4 → M10 → M9: Significant but smaller ($p = .001$)

M4 → M11 → M9: Strong significant mediation ($p < .001$)

**Direct Effect (after mediators)**

Many M4 indicators reduced in strength, confirming partial mediation.

Similar Conclusion

**$H_{04}$ is rejected.**

The TPB constructs **partially mediate** the effect of microsystem factors on dropout intention.

**Table 10 : Final Summary of Hypotheses**

| Hypothesis | Statement | Result |
|---|---|---|
| **$H_{01}$** | M4 → M9 (no relationship) | Rejected |
| **$H_{02}$** | M4 → M8/M10/M11 (no effect) | Rejected |
| **$H_{03}$** | M8/M10/M11 → M9 (no prediction) | Rejected |
| **$H_{04}$** | No mediation by M8, M10, M11 | Rejected |

**Discussion**

The present study examined how attitude toward school influences dropout intention among already dropped-out secondary students in West Bengal and whether academic, behavioural, and emotional factors mediate this relationship. Guided by Ajzen's Theory of Planned Behaviour and Bronfenbrenner's ecological perspectives, the findings provide important insights into the multidimensional nature of school disengagement.

First, the results demonstrate that attitude toward school is a **strong and consistent predictor** of students' intention to drop out. Several negative school experiences—low teacher encouragement, poor classroom engagement, uninteresting lessons, and strained peer interactions—showed significant total effects on dropout intention. These findings align with previous studies showing that students' affective perception of school is central to school persistence.

Second, the GLM models reveal that attitude toward school significantly predicts all three mediators: academic difficulties, behavioural adjustment, and emotional disengagement. Among these, **academic challenges and emotional disengagement** emerged as the strongest outcomes of negative school attitudes, consistent with evidence that disengaged students gradually develop academic backlogs, reduced concentration, and negative emotional ties with school.

Third, the mediation analysis confirms that the effect of school attitude on dropout intention is largely **indirect**.

**Emotional disengagement (M11)** showed the strongest mediating effect. When students feel emotionally disconnected, undervalued, or unsupported, their dropout intention sharply increases.

**Academic difficulties (M8)** also significantly mediated the relationship, indicating that students who lose interest in learning soon fall behind academically, pushing them toward dropout.

**Behavioural maladjustment (M10)** played a smaller—but significant—role, suggesting that classroom behaviour problems are a secondary pathway linking school attitude and dropout intention.

Overall, the study demonstrates that dropout is not an abrupt decision; rather, it emerges from a progressive cycle of negative school experiences into emotional disconnection then to academic struggles finally **dropout intention**.

## 6. Conclusion and Implications

This study highlights the crucial role of students' school attitude in shaping their intention to drop out. The findings show that negative perceptions of school contribute directly to dropout intention and indirectly through academic difficulties, behavioural maladjustment, and emotional disengagement.

**Key implications:**

**1. Early identification of disengagement**

Schools must track emotional disengagement early, as it emerged as the **strongest mediator**. Students showing boredom, withdrawal, or negative emotions toward school require targeted support.

**2. Strengthening academic support systems**
Academic difficulties significantly contributed to dropout intention. Remedial teaching, personalised learning, and competency-based support can address these challenges.
**3. Teacher training and supportive school environment**
Several significant total effects relate to teacher–student relationships. Training teachers in empathy, motivation strategies, and inclusive classroom practices can reduce dropout risk.
**4. Community and workplace-level interventions for dropouts**
Given that the participants were already working, vocational centres and community-based education programs can help reintegrate them into learning environments.
**5. Policy implications**
The results underscore the need for state-level dropout prevention mechanisms focusing on emotional, behavioural, and academic domains—not only on attendance and scholastic achievement.

## 7. Limitations and Future Scope

Despite its strengths, the study has several limitations:

1. **Cross-sectional data** restrict causal inference, though mediation patterns are theoretically consistent.
2. Data were collected from students who have **already dropped out**, which may introduce recall bias about their previous school experience.
3. The use of self-reported measures may have social desirability effects.
4. The study was confined to West Bengal; future studies could compare multiple states.

### Future Research Recommendations

- Longitudinal studies tracking students before dropout.
- School-level interventions to test which components reduce disengagement.
- Multi-group SEM comparing boys and girls, rural and urban respondents.

Mixed-method designs integrating interviews for richer understanding.

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