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Exploring the Relationships Among perceived school support, teacher efficacy, and teachers' attitudes towards inclusive practice in Bangladesh: A Structural Equation Modeling Approach

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Abstract

Teachers' attitudes towards inclusive education have been identified as a crucial element for effective inclusion practices. The literature consistently links it to teachers' efficacy and school-related factors. However, the relationship among perceived school support, teachers' efficacy, and attitudes remains unexplored in the Bangladeshi context. Therefore, the study aims to explore the relations among perceived school support (PSS), teachers' efficacy (TE), and teachers' attitudes toward inclusive education (TAIE). Therefore, the study used structural equation modeling (SEM) to explore relationships among the constructs and subsequently employed bootstrapping to test the mediating effect of TE on the relationship between PSS and TAIE. Thereafter, the study explains this mediating mechanism in light of the theory of planned behavior (TPB). The study's findings reveal that perceived school support does not have a significant impact on teachers' attitudes towards inclusive education (TAIE). However, PSS significantly influences teachers' efficacy ($\beta = 0.357$, $t = 9.299$, $p < 0.001$) and, subsequently, TE positively impacted teachers' attitudes ($\beta = 0.462$, $t = 8.521$, $p < 0.001$). Notably, TE has a significant mediating effect on the relationship between PSS and attitudes ($\beta = 0.164$, $t = 6.653$, $p < 0.001$), and the study model reported predictive relevance and moderate predictive power. The study recommends enhancing school facilities, leadership quality, and colleague and parent support to implement inclusivity in real classroom contexts. Besides, policymakers and administrators should focus on teacher training to enhance the effectiveness of inclusive practices.

Introduction

Inclusive education (IE) refers to an education system in which all students, regardless of disability, gender, socio-economic status, and other differences, can participate in learning in a common learning environment (AuCoin et al., 2020). It nurtures the cornerstones of fairness, human rights, and social justice in the education system (Ainscow, 2020). The core philosophy of inclusion is not only placing special needs children physically in classrooms but also accommodating the curriculum, pedagogical methods, evaluation, and overall school culture so that all children can participate in meaningful learning experiences (Sharma & Nuttal, 2016). In recent times, global education has emphasized ensuring inclusive education for all students, with equal rights and access to proper education under one roof (Savolainen et al., 2022). Accordingly, numerous international policies and frameworks, including the Sustainable Development Goals (United Nations, 2015), have emphasized IE and quality education as fundamental rights of all learners. And these initiatives are crucial to achieve the SDG4 goal (United Nations, 2019) and to promote favourable learning opportunities for all students. Despite these strong global commitments towards implementing IE, it remains uneven across the educational system, especially where structural and institutional limitations exist.

Teachers are widely recognized as a key element in overcoming limitations to implementing IE because their actions, instructional practices, classroom management techniques, and interactions with students directly shape inclusive learning environments in schools (Jerlinder et al., 2010). Teachers' knowledge, abilities, skills, self-efficacy, and positive attitude toward inclusive education are crucial to implementing IE in the classroom (Parey, 2023). For this reason, "teacher-related factors" have received scholarly attention for the implementation of effective and sustainable IE practices (Büssing et al., 2019). Among these factors,

teachers' attitudes towards inclusive education have been identified as one of the major factors for successful inclusion (Jurca et al., 2023). A teacher's attitude towards educating special students in a mainstream classroom is related to their knowledge, skills, feelings, and self-efficacy (Boyle et al., 2020). In this regard, teachers' positive attitudes are related to how they consider diversity practice, and how they apply different pedagogical approaches for different students (Sharma & Sokal, 2015). On the other hand, negative attitudes toward teachers' resistance to inclusive practices and their effectiveness (Jury et al., 2022). However, the existing literature shows that teachers' attitudes towards inclusion are influenced by numerous environmental and personal factors. In addition, teachers' self-efficacy is important for motivating them to maintain inclusivity in classroom settings (Dignath et al., 2022). It refers to teachers' beliefs and sentiments regarding their ability to organize and execute actions required to conduct class in mainstream classrooms (Bandura, 1991). Additionally, teachers' self-efficacy is more effective at recovering from challenges, generating innovative ideas, and holding more positive attitudes towards inclusive practices (Pit-ten Cate et al., 2018). Sharma et al. (2012) have identified three subscales of teachers' efficacy toward inclusive practice, such as managing behaviour (i.e., teachers' confidence in their capacity to regulate a classroom with disruptive students, therefore fostering a more favourable learning atmosphere for all learners), collaboration (i.e., teachers' beliefs in their capacity to collaborate with colleagues, parents, and other professionals to enhance student learning), and teaching instruction (i.e., the educator's confidence in their ability to execute pedagogical practices, including separate instruction for those with impairments). Hence, previous studies have consistently reported that teachers' self-efficacy is the key predictor of teachers' TAIE (Azizi, 2022; Savolainen et al., 2012, 2022). Beyond teachers' individual characteristics, institutional support also plays a critical role in IE practice. Perceived school support refers to providing administrative support, peer and parent support, professional development opportunities, instructional materials, and a collaborative atmosphere to ensure IE (Podell & Tournaki, 2007). Positive school environments have enhanced teachers' confidence, reduced work stress, and fostered favourable attitudes towards IE (Shaughnessy, 2004).

Previous studies have reported that the concepts of IE are the same worldwide, but the criteria for institutional support, teachers' attitudes, and self-efficacy differ. In developed countries, teachers' self-efficacy and attitudes depend on their autonomy and collaboration, along with proper policy formation and appropriate institutional support (Woodcock et al., 2022). For instance, Japan prepares its teachers through proper training to work with students with disabilities, which increases pre- and in-service teachers' self-efficacy and attitudes towards practicing diversity in the classroom (Yada & Savolainen, 2017). On the other hand, in the developing countries context, IE faces numerous challenges, such as insufficient teacher training and limited institutional support (Van Staden-Payne & Nel, 2022). For example, in Ghana, teachers in mainstream schools have reported low self-efficacy due to insufficient training and support (Robinson, 2024).

In Bangladesh, due to national and international commitments, inclusive practice is prioritized in the classroom teaching and learning (Ahsan and Burnip, 2016). The National Education Policy-2010 emphasizes ensuring equity and social justice within education systems, creating opportunities to include children with disabilities and other marginalized groups in schools (Mamun et al., 2023). Despite policy-level documents receiving priority, implementing inclusive education in Bangladeshi schools faces diverse challenges.

Several studies indicate that teachers cannot ensure an inclusive environment in the school settings due to their lack of knowledge and skills. As teachers do not receive sufficient training in inclusive and diverse practices, this challenge limits their ability to implement inclusive classroom. Furthermore, inadequate infrastructural resources and limited support from parents and peers hinder the implementation of inclusive practices in schools (Chowdhury et al., 2024; Saha & Saha, 2024).

These challenges indicate a significant gap between policy priorities and classroom-level practices in Bangladesh. As a result, it is important to explore current levels of teachers' efficacy (TE) and teachers' attitudes toward inclusive education (TAIE), and to examine the influence of perceived school support (PSS) on these factors. The present study aims to investigate the relationships among PSS, TE, and TAIE. Structural equation modelling (SEM) was employed to examine these relationships, and a bootstrapping technique was used to determine the mediating effect of TE in the relationship between PSS and attitudes. The mediating mechanism is further explained within the theory of planned behaviour (TPB). The findings provide empirical evidence to inform the refinement of policies, teacher professional development, and school-based support strategies to promote inclusive education in Bangladesh. The results also offer guidance for designing effective professional development programs for teachers.

Developed Hypothesis

Perceived school support and attitude

Attitude is the most significant factor influencing individual activities (Ajzen, 2005). Sharma & Nuttal (2016) argued that educators with positive attitudes are more inclined to implement inclusive education. However, Teachers' attitudes towards implementing inclusive education (IE) have been markedly affected by the nature and extent of assistance provided to them (Vanderpuye et al., 2006), with insufficient support and training linked to negative attitudes towards IE (Campbell et al., 2003). Working in a supportive school environment may enhance teachers' resilience in instructing pupils with impairments (Wilson et al., 2020). In this case, school support is a crucial factor in implementing inclusive teaching approaches and significantly affects teachers' attitudes toward inclusion (Ahmmed et al., 2012). To implement inclusive education, teachers must feel supported and have sufficient human and material resources to implement inclusive teaching approaches. Regarding this, Werner et al. (2021) revealed that perceived school support is a significant predictor of TAIE. Therefore, the study formulated the following hypothesis:

H1: Perceived school support positively influences teachers' attitudes towards IE.

Perceived school support and teachers' efficacy

According to Bandura (1997), "self-efficacy" refers to a person's confidence in their ability to carry out necessary actions successfully to achieve desired outcomes. It suggests that a person won't be motivated to perform an act if they don't think their actions will have the desired result. Self-efficacy may be regarded as a motivating factor for human behavior. Shilshtein and Margalit (2019) found that teachers' sense of efficacy is influenced by support from the school principal. Likewise, Woodcock & Hardy (2025) indicated

that well-equipped teachers are more likely to adopt innovative teaching practices and are more confident in practicing IE in school. Highly efficacious educators are more inclined to enhance student motivation and implement proactive classroom management strategies (Andreou & Rapti, 2010). In line with this finding, Adjei (2018) reported a significant positive correlation between instructors' self-efficacy and classroom behaviour control strategies. Werner et al. (2021) revealed that higher PSS positively influences TE. Another study by Wilson et al. (2020) in a primary school context found that institutional supports significantly predicted teachers' self-efficacy. Therefore, the study developed the following hypothesis:

H2: Perceived school support positively impacts teachers' self-efficacy.

Self-Efficacy and Attitude

In the literature, teachers' self-efficacy can broadly be defined as their beliefs in their ability to positively influence students' outcomes (Tschannen-Moran & Hoy, 2001). Previous studies found that teachers' self-efficacy was positively correlated with their TAIE (Malinen, 2013; Savolainen et al., 2012; Yada & Savolainen, 2017). Teachers with high self-efficacy scores reported a more positive attitude towards inclusion (Savolainen et al., 2012), especially when considering the inclusion of students with disabilities (Hofman & Kilimo, 2014). Yada et al. (2018) also indicated that high teacher self-efficacy is associated with positive attitudes toward inclusion. Educators with high self-efficacy beliefs feel capable of responding to the special demands of students, shaping a positive learning environment, developing effective teaching strategies, displaying empathetic behaviours toward children with disabilities, and are a critical and decisive factor in inclusion (Katsora et al., 2022). Teachers with high self-efficacy can manage the classroom even in difficult situations, engage students' interest, and motivate students to achieve high academic standards (Hussain & Khan, 2022). Savolainen et al. (2022) found that teacher self-efficacy has a positive effect on both teachers' attitudes and perceptions and their concerns towards inclusive education. Ozokcu (2018) also reported a positive, statistically significant effect of self-efficacy on TAIE. Similarly, Azevedo et al. (2025) reported that TE is the key predictor of teachers' attitudes. Therefore, the study formulated the following hypothesis:

H3: Teachers' self-efficacy positively impacts attitudes.

Teachers' self-efficacy as a mediator

In the context of TPB theory, school leadership, managing committee, administration, peer and parent support, and school instrumental resources are regarded as subjective norms; perceived behavioural control means teachers' ability or belief to manage and instruct an inclusive classroom and collaborate with peers, parents, and specialists to make a meaningful learning environment. These subjective norm elements significantly influence perceived behavioural control. Literature also found that PSS is a significant predictor of teachers' efficacy (Azevedo et al., 2025; Werner et al., 2021; Wilson et al., 2020). Attitude is a multidimensional scale, encompassing affective, cognitive, and behavioural dimensions. The present study considered the behavioural dimension (intention to act) as an attitude toward inclusive practice. And several studies reported the positive influence of TE on teachers' attitudes (Azevedo et al., 2025; Azizi, 2022; Gülsün et al., 2023). A few studies examined the role of TE as a mediating variable between perception of PSS and

teachers' TAIE. A study conducted by Werner (2021) with school teachers found that TSE mediates the relationship between school support and attitudes. Similarly, a study by Azevedo et al. (2025) found that self-efficacy mediates the relationship between school climate and teachers' TAIE. Furthermore, Wilson et al. (2020) depicted that self-efficacy acted as a mediator between teachers' perceptions of the school climate and reported inclusive behaviour. Therefore, the study formulated the following hypothesis:

H4: Teachers' self-efficacy mediates the relationship between PSS and attitudes.

Theoretical Framework

According to the theory of planned behaviour (TPB) (Ajzen, 1991), behaviours are influenced by intentions, which are determined by three factors: subjective norms, perceived behavioural control, and attitudes. Subjective norms are defined by social pressures and institutional expectations, and by how much the individual values those expectations. Students, colleagues, and administrators all have expectations about how teachers teach. When a teacher receives strong administrative support and high expectations for inclusive practice, they are motivated to comply. Perceived Behavioural Control (PBC) is teachers' belief about their skill and capacity to implement inclusive teaching in classroom practice. Teachers may face various structural barriers regarding this. When teachers have high self-efficacy, they possess adequate skills and training to address the barriers. Teacher training, teaching assistance, leadership, parent and societal support, and other resources are considered perceived school support and can directly mitigate structural barriers. Highly self-efficacious teachers are less likely to view inclusion as a burden. This shift in perception turns a negative attitude into a positive, welcoming attitude towards inclusive education. Therefore, the underlying mechanisms among school support, teachers' self-efficacy, and attitude can be explained by the TPB framework, which posits that these three variables do not operate in isolation; they interact to shape the teacher's final behaviour. The theory of planned behaviour (Ajzen, 2012), which claims that self-efficacy affects individuals' attitudes.

Ethical considerations

The study was carried out in accordance with the 1964 Helsinki Declaration and its revisions, and with the ethical standards, with the review and approval of the Institutional Animal, Medical Ethics, Biosafety, and Biosecurity Committee (IAMEBBC), University of Rajshahi, Bangladesh; memo 231/320 (42)/IAMEBBC/IBSc.

Methodology

Research Design and Participants

A cross-sectional study design was employed, using convenience sampling of secondary school teachers in Bangladesh. Data were collected from 300 respondents by self-administered questionnaires. A priority analysis conducted using the G*Power software (version 3.1.9.7) indicated that the sample size 68 was enough for obtaining valid results (power > 0.80, $\alpha = 0.05$, and effect size $f^2 = 0.15$)(see Fig. 1). There are 128 female participants (42.7%) and, remaining participants, 172 males (57.3%).

Measurement Instruments

Teacher Efficacy

The Teacher Efficacy for Inclusive Practice (TEIP) scale, developed by Sharma et al. (2012), was used in the study to assess teachers' perceived efficacy in teaching for inclusive education. This measure has 18 items with a six-point Likert scale ranging from “Strongly Disagree” (1) to “Strongly Agree” (6). The TEIP scale produces a total score that ranges from 18 to 108. High scores indicate a strong perception of teaching efficacy among educators regarding inclusive education. The Cronbach alpha for this scale is 0.906.

Attitudes toward inclusive education

The Multidimensional Attitudes Toward Inclusive Education Scale (MATIES) was originally developed by Mahat (2008). The MATIES scale included three subscales: affective, cognitive, and behavioural dimensions. This study employed the behavioural sub-scale comprising six items. Participants expressed their views using a 6-point Likert scale, ranging from 1 (strongly disagree) to 6 (strongly agree). The study reveals Cronbach's alpha is 0.819.

Perceived school support for inclusive education (PSSIE) scale

The Perceived School Support for Inclusive Education (PSSIE) was developed in Bangladesh (Ahmed, 2013). The instrument has 8 items, and participants responded on a 5-point Likert scale, with anchors ranging from 1 (not at all) to 5 (a significant extent). A higher score on the measure indicated a higher level of perceived school assistance. The study reveals Cronbach’s alpha is 0.835.

Data Analysis

The study utilized a partial least squares (PLS) model to examine the measurement and structural models in SmartPLS version 4.1.0.1 (Hair et al., 2022). This method was chosen because the dataset does not follow multivariate normality, which is often violated in survey research due to its tendency to deviate from normality (Chin et al., 2003). For multivariate normality, the threshold points for skewness were ± 3, and for kurtosis were ± 20 (Cain et al., 2017). The study calculated skewness and kurtosis of 3.70 and 40.08, indicating that the study variables violated the cut-off point (Mardia, 1970).

Subsequently, given that the data were collected from a single source, the study addressed the potential concern of common method bias (CMB) by doing a full collinearity assessment, adhering to the guidelines established by Kock (2015). This required regressing all variables onto one variable, yielding a variance inflation factor (VIF) below 5. The data presented in Table 1 indicate that CMB is not a concern in this investigation.

Table 1
Results of Collinearity Testing

Constructs	MAT	PSS	TECOL	TEINS	TEMA
VIF	1.345	1.199	1.972	1.815	2.124

PSS=Perceived school support and MAT = Attitudes; TECOL = Teaching efficacy for collaboration, TEINS = Teaching efficacy for instructions, TEMA = Teaching efficacy for management.

Measurement Model

Anderson and Gerbing (1988) suggest a two-step procedure for evaluating the proposed model. Initially, it evaluated the measurement model to assess the validity and reliability of the constructs, following the recommendations of Hair et al. (2022). This study employed a structural model to evaluate our formulated hypothesis. The study assessed the loadings, average variance extracted (AVE), and composite reliability (CR) for the measurement model. Loadings must be ≥ 0.5, AVE should be ≥ 0.5, and CR must be ≥ 0.7. Table 2 indicates that all AVEs are greater than 0.5, and all CRs exceed 0.7. Four items were deleted for insufficient loadings.

Table 2
Factor loading of various constructs

Constructs	Items	Loading	CR	AVE
Attitudes	MAT1	0.663	0.871	0.530
	MAT2	0.723		
	MAT3	0.744		
	MAT4	0.717		
	MAT5	0.792		
	MAT6	0.725		
Perceived school support	PSS1	0.822	0.868	0.526
	PSS3	0.741		
	PSS4	0.823		
	PSS5	0.579		
	PSS6	0.626		
	PSS8	0.724		
Collaboration	TECOL10	0.793	0.889	0.616
	TECOL11	0.869		
	TECOL12	0.799		
	TECOL7	0.778		
	TECOL9	0.673		
Instructions	TEINS13	0.648	0.887	0.613
	TEINS15	0.825		
	TEINS16	0.853		
	TEINS17	0.699		
	TEINS18	0.866		
Managing behavior	TEMA1	0.516	0.878	0.550
	TEMA2	0.824		
	TEMA3	0.704		
	TEMA4	0.812		
	TEMA5	0.784		
Note: PSS2, PSS7, TECOL 8, and TEINS14 were deleted due to low loadings				

Constructs	Items	Loading	CR	AVE
	TEMA6	0.765		
Note: PSS2, PSS7, TECOL 8, and TEINS14 were deleted due to low loadings				

Figure 2 illustrates that teachers' efficacy towards inclusive education (TEIP) was defined as a second-order construct. The study employed the two-step, disjoint approach suggested in PLS to model second-order constructs in the PLS analysis. The study assessed the validity and reliability of the second-order constructs, as demonstrated in Table 3. The results shown in Table 3 exceeded the designated thresholds, demonstrating sufficient convergent validity.

Table 3
Factor loading, CR, and AVE for higher-order constructs

	Subscale	Outer Loadings	CR	AVE
Teachers' efficacy	TECOL	0.869	0.894	0.737
	TRINS	0.825		
	TEMA	0.880		

In step 2, the research assessed discriminant validity using the HTMT criterion as advised by Henseler et al. (2015) and modified by Franke and Sarstedt (2019). HTMT values should not exceed 0.85; a more lenient threshold is 0.90. As demonstrated in Tables 4 and Table 5 for higher-order constructs, the HTMT values were all below the stringent threshold of < 0.90; hence, the study indicates that the respondents recognized the constructs as distinct.

Table 4
Results of HTMT ratio

Constructs	1	2	3	4	5
1.MAT					
2.PSS	0.285				
3.TECOL	0.542	0.332			
4.TEINS	0.467	0.227	0.666		
5.TEMA	0.454	0.366	0.738	0.734	

Table 5
HTMT Discriminant validity for second order

Constructs	1	2	3
1.TSE			
2.MAT	0.588		
3.PSS	0.365	0.285	

The Fornell and Larcker (1981) criterion assessed discriminant validity, indicating that the square root of the AVE for each construct must exceed its correlation with all other constructs. The findings in Tables 6 and Table 7 demonstrate discriminant validity for both first order and higher-order constructs, affirming the validity and reliability of the measurement items.

Table 6
Mean, standard deviation, and Fornell and Larcker Criterion

Constructs	Mean (S.D)	MAT	PSS	TECOL	TEINS	TEMA
MAT	4.99(0.560)	0.728				
PSS	2.88(0.894)	0.257	0.725			
TECOL	4.64(0.732)	0.458	0.332	0.785		
TEINS	4.79(0.719)	0.408	0.205	0.568	0.783	
TEMA	4.81(0.715)	0.404	0.369	0.636	0.617	0.742

Table 6 also shows that Bangladeshi secondary school teachers exhibited a positive attitude towards inclusive education (M = 4.992, SD = 0.56). Results showed higher average scores for teachers' efficacy in collaboration (M = 4.64, SD = 0.732), instruction (M = 4.793, SD = 0.719), and management (M = 4.809, SD = 0.715). The study indicated a lower average value on perceived school support (M = 2.879, SD = 0.894). The results found that the attitudes towards inclusive education scale shows weak to moderate positive correlation with all dimensions of self-efficacy. In this sense, positive attitudes are associated with greater teaching efficacy in implementing inclusive education. In addition, perceived school support revealed a significant weak positive correlation with attitude and teachers' efficacy subscales.

Table 7
Franker-Larcker criterion for the second order.

Constructs	LV scores - TE	MAT	PSS
LV scores - TE	0.859		
MAT	0.494	0.728	
PSS	0.357	0.258	0.726

Structural model

The subsequent phase in SEM involved evaluating the hypothesized relationship to validate the provided hypothesis. According to Becker et al. (2023), the study provided the path coefficients, standard errors, t-values, and p-values of the structural model using a bootstrap resampling technique with 10,000 samples (Ramayah et al., 2018). Hahn and Ang (2017) asserted that p-values are insufficient for assessing hypothesis validity; therefore, they recommend a multidimensional approach that includes p-values, confidence intervals, and effect sizes. Table 8 delineates the criteria for assessing the formulated hypotheses.

Table 8
Direct relationship results

Hypothesis	Relation	Beta	SD	T values	P values	LL	UL	VIF	f^2
H1	PSS -> MAT	0.089	0.059	1.508	0.066	-0.021	0.177	1.146	0.00
H2	PSS -> LV scores - TE	0.357	0.038	9.299	< 0.001	0.284	0.411	1.000	0.15
H3	LV scores - TE -> MAT	0.462	0.054	8.521	< 0.001	0.358	0.539	1.146	0.25

Using a 90% confidence interval with a bootstrapping of 10,000

The study indicates that the VIF values are less than 3.3, indicating no multicollinearity in the proposed model. The table reports that PSS has no impact on MAT (β = 0.089, t = 1.508, p = 0.066). Hence, H1 is not supported. Results indicate that perceived school support increases teachers' efficacy TE (β = 0.357, t = 9.299, p < 0.001). So H2 was supported. The study also demonstrated a significant impact of TE on MAT (β = 0.462, t = 8.521, p < 0.001). So H3 is supported. The research illustrates that the predictors accounted for 25.1% of the variance in MAT, with an R^2 of 0.251 at the initial measurement (see Fig. 3).

While PSS has a significant medium effect on TE (f^2 = 0.15), it has no effect on MAT. Thereafter, TE also has a medium effect on MAT, with an effect size (f^2) of 0.25, where values of 0.02, 0.15, and 0.35 indicate small, medium, and large effects, respectively (Cohen, 2013).

Mediation Analysis

Following Preacher and Hayes' (2008) guidelines, the current study used a bootstrapping method to examine the indirect effect, thereby allowing an assessment of the mediating hypothesis. The mediating relationships were determined by whether the confidence interval excluded zero.

Table 9
Specific Effect

Hypothesis	Relation	Beta	SD	T values	p-values	LL	UL	f^2
H4	PSS > TE-> MAT	0.165	0.025	6.661	< 0.001	0.117	0.210	0.027

Using a 95% confidence interval with a bootstrapping of 10,000

This study sought to determine the degree to which TE mediates the association between variables, and the findings revealed a significant mediating effect (H4: β = 0.165, t = 6.661, p < 0.001). Furthermore, including teachers' efficacy as a mediator, the total indirect effect remained significant (β = 0.165, t = 6.661, p < 0.001). Notably, the total effect of PSS on MAT was significant (β = 0.254, t = 4.515, p < 0.001). Thus, the finding indicates that TE mediates the relationship between PSS and MAT. The confidence intervals with 95% bias-corrected do not show any intervals straddling zero. Therefore, the study concludes that H4 is supported. The effect size (f^2) is an important measure in structural equation modeling (SEM), as it assesses the effect of exogenous constructs on the endogenous construct. For interpreting effect sizes, this study followed Cohen's (2009) recommendations, where f^2 values of 0.01, 0.09, and 0.25 denote small, medium, and large effect sizes, respectively. Table 9 shows a small effect of TE as a mediator between PSS and MAT.

PLS predict power

Following the recommendations of Shmueli et al. (2019), the PLS-predict method, a holdout-sample-based strategy, is employed to assess the model's predictive performance. This method assesses predictive relevance by producing case-level predictions at both the item and construct levels through a 10-fold cross-validation procedure. Shmueli et al. (2019) contend that robust predictive capability is demonstrated when all item-level discrepancies (PLS-LM) are lower than the linear model standard. If all differences are greater, then the predictive relevance is not established. A scenario with most differences lower indicates moderate predictive power, whereas a small number of lower differences suggests low predictive power. The findings presented in Table 10 show that $Q^2predict > 0$, meaning the model has predictive relevance, and half of the PLS model's errors are smaller compared to the linear model, which means that moderate predictive power exists for the proposed model.

Table 10
PLS-Predict

Items	$Q^2predict$	PLS_RMSE	LM_RMSE	PLS-LM
MAT1	0.034	0.909	0.907	-0.002
MAT2	0.006	0.760	0.761	0.001
MAT3	0.006	0.812	0.789	-0.023
MAT4	0.008	0.709	0.710	0.001
MAT5	0.037	0.710	0.712	0.002
MAT6	0.069	0.715	0.706	-0.009

Discussion

The study aimed to investigate the intricate relation among perceived school support, teachers' self-efficacy, and the attitude of secondary school teachers in Bangladesh. The study reveals that PSS has no direct impact on teachers' TAIE. It is found that PSS has a positive and significant impact on TE, and subsequently, TE has a significant impact on teachers' attitudes. Notably, the study depicts that TE mediates the relation between PSS and teachers' attitudes.

Perceived school support and attitude

The present study found that teachers have a positive attitude toward inclusive practice, which is consistent with a previous study conducted in Bangladesh (Ahmmed et al., 2014). The study also indicated that PSS does not significantly impact teachers' TAIE. This finding align with other studies(Azevedo et al., 2025; Werner et al., 2021), which indicates the school leadership, managing committee, teaching staff, and social support are less aware of inclusive education here in Bangladesh. Though, it is an important consideration for effective inclusion whether or not teaching staff and school principals nurture positive TAIE (Forlin et al., 2011). Desombre et al. (2021) depicted that the social support of inclusion had a significant positive impact on teachers' attitudes about inclusion in France, where school leadership and social support may possess a significant role in fostering inclusion culture. The cultural differences and education system may have an impact on these findings. Besides this, the secondary school teachers in Bangladesh, particularly MPO and non-govt. teachers, belong to a low salary structure that can make a barrier to translating into a positive attitude toward inclusive education. Therefore, it is necessary to promote govt. policy along with social and political awareness among people, parents, teaching staff, and peers for inclusive education, considering diversity as a strength rather than an obstacle.

Perceived school support and efficacy

The present study indicated that PSS significantly positively impacts TSE. In school, comprehensive inclusive processes and practices, collaboration and feedback among educators, and leadership support collectively enhance teachers' self-efficacy for inclusive education. In line with this finding, Sharma et al. (2012) found that PSS has a significant impact on teachers' efficacy and execution of inclusive teaching practices. In Belgium, Mieghem et al. (2020) reported higher levels of PSS, which enhance TE. Likewise, Hosford and O'Sullivan (2016) found that a positive school climate predicts TSE for IE in Ireland. Another study conducted among Dutch primary school teachers found that emotional support increased TSE (Bruggink et al., 2016). Furthermore, Wilson et al. (2020) revealed that school climate predicted TSE for IE in Scotland. Therefore, Opoku et al. (2021) emphasized the positive school environment in enabling TSE at IE Ghana. An inclusive educational environment can facilitate opportunities for educators to enhance teacher self-efficacy through mastery experiences and social persuasion.

Self-efficacy and attitudes

The present study demonstrated that TSE significantly positively impacted teachers' attitudes. This finding aligns with Werner et al. (2021), who found that TSE positively affects teachers' attitudes toward IE. Likewise, Yada et al. (2022) conducted a meta-analysis and asserted that teachers' self-efficacy positively predicted attitudes. Teachers with high self-efficacy are highly confident about their ability to implement inclusivity in a classroom setting. Teachers' self-efficacy beliefs predict teachers' actual behaviour (Savolainen et al., 2020). Wilson et al. (2020) found a relationship between teachers' self-efficacy beliefs and TAIE. Previous literature underscores that even only certain aspects of self-efficacy, such as efficacy in collaboration (Malinen, 2013) or regarding instructional strategies (Wilson et al., 2020), were significant predictors of TAIE.

Mediator

The current study revealed that TSE mediates the relationship between PSS and TAIE. In the context of TPB theory, perceived school support enhances teachers' efficacy through providing instructional material, teacher training, and peer and societal support. Subsequently, high-efficacy teachers demonstrate a more positive attitude and greater intention to create a welcoming atmosphere for inclusive practices. In line with this finding, Werner (2021) indicated that TSE mediates the relationship between school support and attitudes. Similarly, another study by Azevedo et al. (2025) in Portuguese, with 463 teacher participants, revealed that TE mediates the relationship between school climate and teachers' TAIE. Furthermore, Wilson et al. (2020) also demonstrated that self-efficacy has a mediating effect between the school climate and behavioural intention (Wilson et al., 2020). Moreover, prior research indicated that school atmosphere, support from administrators, positive relationships among teachers, and the views of fellow educators are critical elements for effective inclusion (Wilson et al., 2020; Woodcock & Woolfson, 2019). Since the current study does not find any direct relation between PSS and attitudes, TSE mediates the relation between them. Therefore, school administrators should foster school support by providing necessary training, social awareness, and instruments to enhance teachers' efficacy and attitude toward inclusive practice.

Limitation

Since data is collected with self-administered questionnaires, there may be social desirability bias. Besides, the study lacks generalizability due to convenience sampling. Furthermore, the study used a cross-sectional design; longitudinal research would yield better results.

Conclusion

In line with the values of justice, equity, and human rights, inclusive education has emerged as a crucial global commitment. In addition to the UN Convention on the Rights of Persons with Disabilities and the Sustainable Development Goal (SDG)-4, Bangladesh places a high priority on ensuring that students with various needs participate meaningfully in mainstream education. However, the implementation of inclusive education in secondary schools remains difficult despite these policy commitments. The study explored the relationship between perceived school support, teachers' efficacy, and teachers' attitudes toward inclusive education. PSS predicted teachers' efficacy, which in turn strongly predicted attitudes, but it had no direct significant impact on teachers' attitudes. In conclusion, the effectiveness of inclusive education in Bangladesh's secondary schools is largely dependent on how capable, empowered, and supported teachers feel. Enhancing teachers' effectiveness is a crucial process that converts institutional support into constructive, practical attitudes toward inclusion.

Declarations

Funding Statement

This study received no external funding.

Declaration of the usage of AI statement'

The authors declare that AI has been used in this study for solely language editing. No AI tools was used to generate, analyse or interpret the research data.

Conflict of Interest

There is no conflict of interest in this study.

Data Availability Statement

Due to the participants' privacy and confidentiality, the data from this study is not publicly available. However, data may be obtained from the corresponding author upon request.

Consent to publish

In this study, all the participants provided informed consent for voluntary participation in this study. They also agreed that anonymized data and information may be used for research publications and dissemination purposes.

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Figures

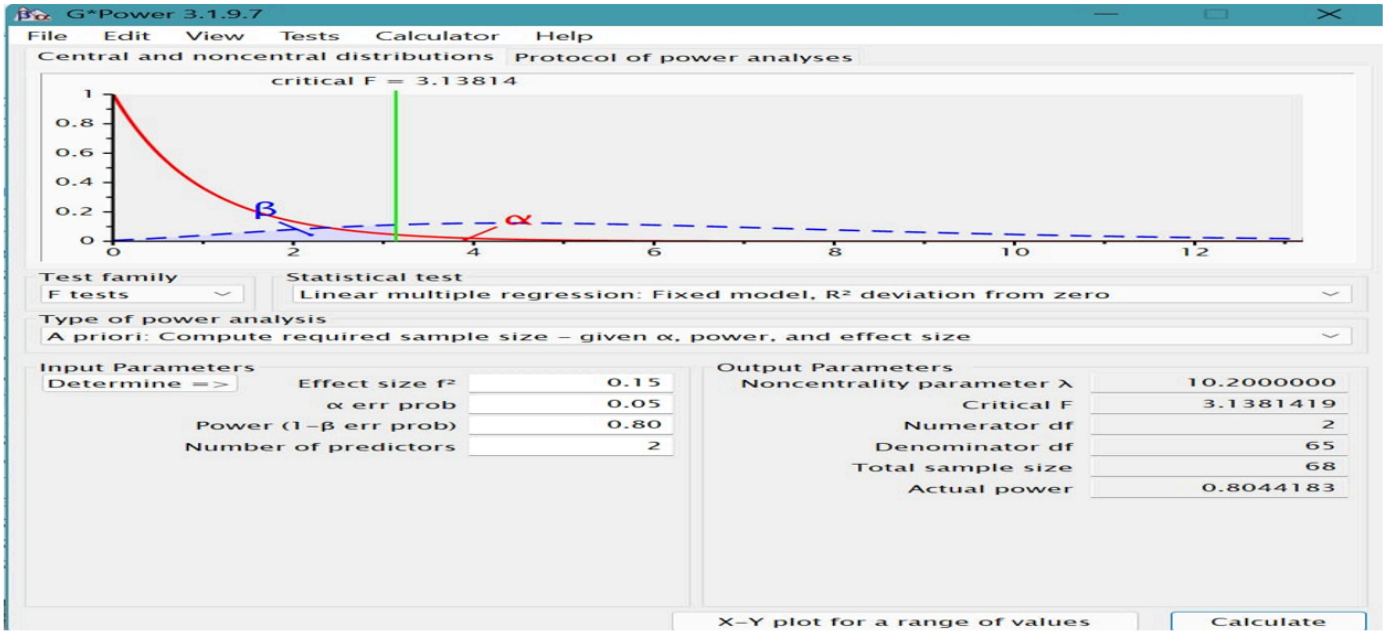


Figure 1

G*power calculation

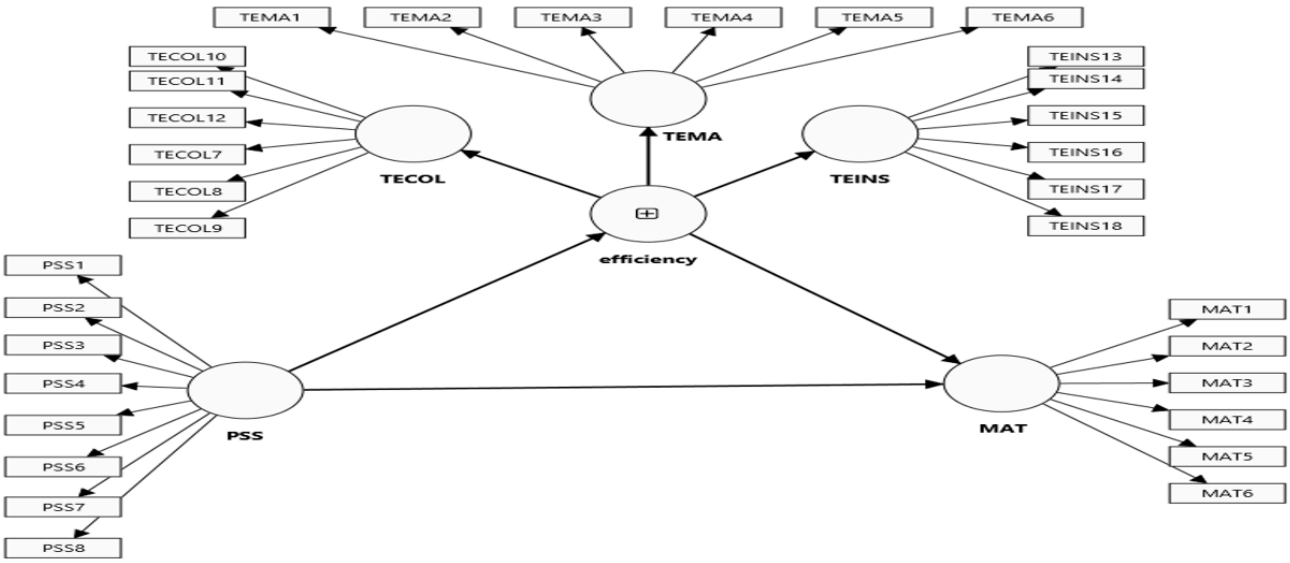


Figure 2

Research model

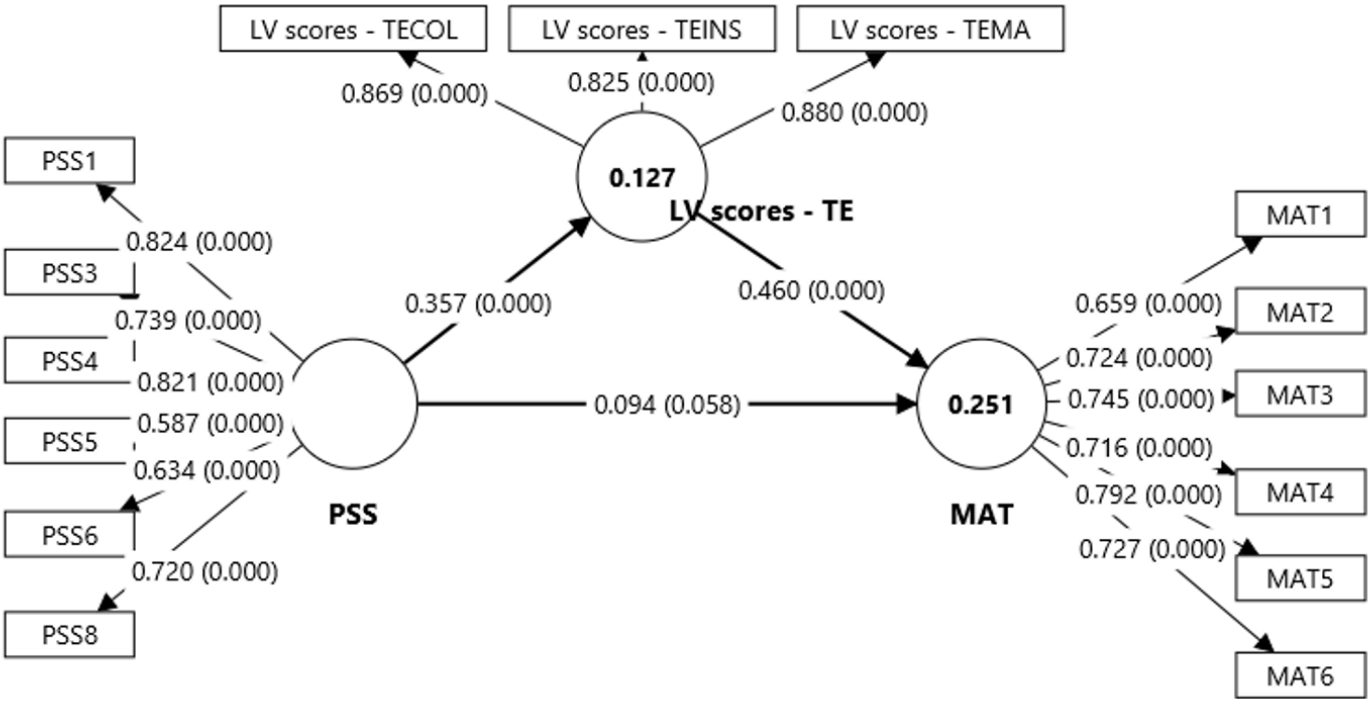


Figure 3

PLS algorithm for disjoint two-stage models