Teacher Support and Students' Academic Resilience in Universal Secondary Education Schools in Luwero District, Uganda

Justine Nansamba[1], Wilson Mugizi[2], Joseph Rwothumio[3], and Joshua Kimata Kato[4]

[1,2,3,4]Department of Educational Planning, School of Education, Kyambogo University, Uganda

Correspondence concerning this article should be addressed to Wilson Mugizi, Email: wmugizi@kyu.ac.ug

Abstract

This study investigated the impact of teacher support on students' academic resilience in Universal Secondary Education schools in Luwero district, Uganda. Specifically, the study examined whether teacher investment of effort, positive regard, and accessibility significantly influenced students' academic resilience, defined as perseverance, help-seeking, and positive affect. Using a quantitative approach and correlational research design, the study surveyed 324 students selected through simple random sampling. Data collection employed a self-administered questionnaire, and analysis involved structural equation modelling (SEM) using SmartPLS. The results revealed that teacher investment of effort, positive regard, and accessibility had a positive and statistically significant impact on students' academic resilience. The findings suggest that teacher support, particularly positive regard, followed by investment of effort and accessibility, fosters students' academic resilience. The study recommends that head teachers sensitise teachers to provide comprehensive support by creating a supportive learning environment that involves being invested in students' academics, accessible, and showing positive regard. This study's practical contribution lies in demonstrating how teacher support can promote students' resilience, providing valuable insights for educators and policymakers.

Keywords: academic resilience, accessibility, investment, positive regard, teacher support

Since the beginning of the 21st century, the concept of academic resilience has gained significant attention in school settings due to its association with positive academic achievement and school-related adaptation (Romano et al., 2021). Student academic resilience has garnered significant attention because it is widely regarded as the key to unlocking school completion and academic success, serving as a vital 'magic weapon' in empowering students to overcome obstacles and thrive in their educational journey (Radhamani & Kalaivani, 2021). Student academic resilience is crucial for educational success. Academically resilient students possess a unique combination of traits, including competence, intrinsic motivation, hope, self-confidence, and

adaptability. Such students demonstrate concern for learning, focus on overcoming challenges, maintain positive relationships, and exhibit determination to succeed. These characteristics significantly influence progressive academic achievement, enabling students to succeed and reach their full potential (Kelly & Ireri, 2022). Being resilient is essential for the social and emotional wellbeing of students. While every student encounters challenges and has a degree of resilience, some of them are more resilient than others. Those with high resilience are more likely to thrive in learning which will improve their academic performance and less likely to suffer from social or psychological health problems (Fru-Ngongban, 2023).

Academic resilience is the learner's ability to withstand stress and adversity. It involves managing day-to-day challenges in academic pursuits through active problem-solving and support-seeking behaviours (Radhamani & Kalaivani, 2021). Academic resilience is the capacity to overcome acute adversity that threatens educational progress (Chisholm-Burns et al., 2019). Martin et al. (2022) define resilience as the tendency of individuals to achieve success in school and life despite environmental adversities resulting from circumstances, conditions, and experiences. In essence, a resilient student, as described by these authors, is one who persists in achieving academic goals despite problems along the academic journey. According to Duby et al. (2022), examples of adverse conditions that students may need to be resilient about include low socio-economic status, hard life experiences, and poor educational background. These adverse conditions can pose significant challenges to students' academic success, mental health, and overall well-being. Developing resilience can help students navigate these challenges and achieve their full potential despite these obstacles.

The concept of resilience was first introduced by psychologists such as Rutter (1964) and Bowlby (1969) in the USA in the 1960s to describe positive adjustment in the face of adversity. In the 1990s, Werner and Smith (1992) explored resilience in the context of child development, focusing on individual characteristics and environmental factors that promote resilience. The 1990s marked a significant turning point, as the concept of academic resilience began to take shape with researchers like Wang and Gordon (1994) investigating how students overcome obstacles to achieve academic success. Inspiring stories of students (e.g. Dr Ben Carson, Oprah Winfrey [King, 2014] and recently in Uganda, Engineer Henry Subbi Kiyimba who joined university carrying a metallic suitcase that graduated with a first class degree [Nagitta, 2024]) who excel against all odds are reported worldwide. The explanation for such exceptional performance despite individual and environmental challenges is attributed to academic resilience (Mwangi et al., 2017). Despite growing up in vulnerable families, resilient students overcome obstacles to display positive development and achieve success in education (Sattler & Gershoff, 2019).

Globally, academic resilience has been a priority for various stakeholders in education. In the United States, for instance, efforts have

focused on increasing school completion rates. The efforts have yielded great results that between 2010 and 2019, high school dropout rates decreased, leading to a significant increase in school completion rates, with the exception of Pacific Islanders. Notably, non-white students still face challenges, with New Hampshire, Alaska, and Louisiana having the highest dropout rates at 9.9% and 9.6%, respectively, significantly higher than the overall rate of 5.1% (Bouchrika, 2023). In other countries, such as the Netherlands, Norway, Denmark, Estonia, Finland, Germany, Ireland, and Slovenia, research has shown that between 30% and 50% of disadvantaged students demonstrate resilience, indicating that a substantial percentage, around 50-70%, struggle with academic resilience (Agasisti, 2018). This highlights the need for targeted interventions to support vulnerable student populations worldwide.

In Asia, Hong Kong and Macao, both special administrative regions of China, have demonstrated high levels of academic resilience, with 53% and 52% of marginalised students respectively, exhibiting resilience (Sandoval-Hernández & Białowolski, 2016). Other Asian countries, such as Japan, Korea, Singapore, Taiwan, and Vietnam, have shown moderate levels of resilience, with between 30% and 50% of disadvantaged students demonstrating resilience. In stark contrast, African countries face significant challenges in terms of academic resilience. Alarmingly, in Algeria and Tunisia, less than 1% of students' exhibit resilience, while in Togo, only 13% of students are expected to complete lower secondary education (Sefa-Nyarko et al., 2018). Students engage in behaviours indicative of low resilience because of inability to withstand stress and adversity. Such behaviours include students engaging in counterproductive behaviours such as drug abuse (39%), physical violence (85%), and psychological violence (50%) in schools in Nigeria (Fawole et al., 2018; Idowu et al., 2018), and increased arson cases in schools that lead to expulsion in Kenya (Wang & Kuo, 2019).

In Uganda, many students exhibit low academic resilience among other factors that is, they struggle to cope with stress and adversity. Indeed, a significant percentage of secondary school students drop out with a transition dropout rate of 38.9% in 2017, showing a slight improvement from 44.5% in 2016 (Oketch, 2020). The Ministry of Education reported that 32% of the 209,432 senior one entrants in 2017 dropped out within the first term (Kwarikunda et al., 2023). Furthermore, students in Uganda struggle with low resilience levels, resulting in poor academic performance, with 58% of students scoring below 50% or average in their first two terms of senior one (Oketch, 2020). Universal Secondary Education schools in Uganda face significant challenges, including substance abuse, physical violence, theft, and sexual immoralities (Mugizi et al., 2022), as well as high dropout rates and absenteeism (Nabugoomu, 2019). These issues reflect a widespread lack of resilience among students, as they struggle to cope with stress and adversity in healthy ways. Instead of persevering (Cassidy, 2016), and seeking help

(Payakachat et al., 2013), many students resort to destructive behaviours, drop out of school, or disengage through absenteeism.

In a study involving Czech schools, Nečasová (2021) found that teacher support had a positive impact on student resilience, highlighting the significance of teacher-student relationships in fostering academic resilience. However, there is a lack of research exploring the extent to which teacher support influences students' academic resilience in the context of Ugandan schools. This knowledge gap was deemed significant because differences in education systems suggested that each country had unique challenges, and understanding the role of teacher support in promoting academic resilience in the Ugandan context was crucial for suggesting effective interventions. In this study, the concept of teacher support was operationalized according to Metheny et al. (2008), who indicated that teacher support encompasses teachers being invested in students, having positive regard and being accessible to them. Therefore, using schools in Luwero District in Uganda, this study tested the hypotheses to the effect that:

H_1: Teachers' investment of effort in students has a significant influence on their academic resilience.

H_2: Teachers' positive regard for students has a significant influence on their students' academic resilience.

H_3: Teachers' accessibility to students has a significant influence on students' academic resilience

Literature Review

The literature review provides an overview of the theory on which this study was hinged that is the cognitive constructivist theory and its relation to teacher support and students' academic resilience. The review also synthesised empirical studies examining the impact of teacher support on students' academic resilience, identifying gaps in the existing research which were the basis of this study.

Theoretical Review

This study was grounded in Piaget's (1936) cognitive constructivist theory, which posits that learners construct knowledge by actively connecting new concepts to their existing understanding (Stapleton & Stefaniak, 2019). Constructivism emphasizes that knowledge acquisition is an active process requiring the reconstruction of knowledge through critical analysis, learning, and unlearning (Dagar & Yadav, 2016). To facilitate this process, constructivism advocates for teaching approaches that incorporate active learning, collaborative learning, teacher support, and contextual learning (Alt, 2015). In this study, teacher support was conceived based on Metheny et al.'s (2008) operationalization which includes three key dimensions that are teachers' invested effort in students' learning, teachers having a positive regard for students, and teachers being accessible and available to students. This study explored how teacher support, as defined by these three dimensions, influences

students' academic resilience. By examining the relationship between teacher support and academic resilience, this study aimed to contribute to the understanding of how teachers can play a supportive role in fostering students' ability to overcome obstacles and succeed academically.

Teacher Support and Students' Academic Resilience

Teacher support refers to the students' perceptions that their teachers care, respect, understand them and are ready to give them help (Yu & Singh, 2018). Teacher support involves providing pupils with social tools to help them cope with demanding educational assignments or overcome negative situations (Ulmanen et al., 2023). Teacher support has been identified as one of the most essential forms of school-related support for students, with both immediate and long-term benefits on intellectual, emotional, and behavioural adjustment to school, as well as their academic resilience (Zheng, 2022). Different scholars have related teacher support to student resilience, highlighting the significant role teachers' play in fostering resilience in students. For instance, Mu et al. (2017) in a study involving Chinese inclusive education reported that teachers who provided strong support built resilience in students. In review Ma (2021) reported that autonomy-supportive teachers who provided guidance, feedback, and praise, and helped students understand tasks and learn better, positively influenced student resilience.

In a study conducted in Kenya, Mwangi et al. (2017) found that external protective factors, including teacher support, were strongly correlated with students' academic resilience. Similarly, Nečasová (2021) found that teacher support had a positive and significant impact on students' resilience. In a study done in Indonesia, Permatasari et al. (2021) also found that teacher support significantly contributed to students' resilience. Furthermore, Radhamani and Kalaivani's (2021) review of 30 studies found that perceived teacher emotional support was positively and significantly related to student resilience. These studies highlight the importance of teacher support in promoting academic resilience among students. In a study involving Italian high school students, Romano et al. (2021) found that perceived teacher emotional support was strongly linked to academic resilience of students. Relatedly, in a study done in the war prone Israel-Gaza border areas, Rosenberg et al. (2018) found that teacher support contributed to resilience in students in war-affected areas. However, existing studies on teacher support and student resilience reveal existence of contextual and methodological gaps. First, literature search revealed that most existing studies have been conducted outside Uganda. Furthermore, Ma et al. (2021) and Radhamani and Kalaivani (2021) carried out reviews. The contextual gap highlighted the need a study in the context of Uganda, while the methodological gap called for more empirical studies.

Methodology

This section covers the methodology used in conducting this study. It covers the research approach and design, the sample selection and sampling technique, and the methods used to collect and analyse data.

Research Design and Study Sample

This study employed a quantitative approach, collecting and analysing numerical data to conduct inferential statistical analysis. Specifically, it utilized a correlational research design to examine the relationship between teacher support and students' academic resilience. This design allowed for the exploration of interconnections between the two variables within a single population (Siedlecki, 2020). The study population were secondary school students in the 14 Universal Secondary Education schools in the Luwero District, with 2052 senior four students as the target population. The sample size comprised 324 determined using Krejcie and Morgan's (1970) table for sample size estimation and obtained using simple random sampling ensuring a representative sample from the population.

Data Collection

This study employed a self-administered questionnaire (SAQ) to collect data from learners. The SAQ consisted of three sections: A, which gathered background characteristics; B, which assessed academic resilience, the dependent variable; and C, which evaluated teacher support, the independent variable. Sections B and C drew on existing tools developed by earlier scholars. For academic resilience, the measures were perseverance (Cassidy, 2016), help-seeking behaviour (Payakachat et al., 2013), and positive affect (Fathiyah et al., 2019). Teacher support was evaluated through measures of teacher investment of effort, positive regard (Metheny et al., 2008), and accessibility (Metheny et al., 2008; Wong et al., 2018). All measures employed a five-point frequency Likert scale, ranging from 1 (Never) to 5 (Always), with intermediate anchors of 2 (Rarely), 3 (Sometimes), and 4 (Often). This design allowed for a comprehensive assessment of the relationship between teacher support and academic resilience among learners.

Data Analysis Methods

The data analysis employed Partial Least Squares Structural Equation Modelling (PLS-SEM) using SmartPLS 4. This approach involved developing measurement models and structural models. The measurement models assessed the relationships between the variables establishing validity and reliability, while the structural models examined the relationships between the variables. Since the study relied on existing measures by previous scholars whose validities had already been established, structural models were carried out to confirm the validity of the indicators without the need for exploratory factor analysis (EFA) (Black et al., 2010). Path estimates were also generated to quantify the strengths of these relationships (Hair & Alamer, 2022). By using PLS-SEM, the study was able to examine the casual linkages between teacher

support and academic resilience providing a comprehensive understanding of the casual linkages between them.

Findings

This section presents the study's findings on the relationship between teacher support and students' academic resilience. The results are organized into three main themes, namely demographic characteristics of the learners, measurement and structural equation models, and Path Model estimates.

Demographic Characteristics of Students

The study examined the demographic characteristics of student participants, including sex, age, and parent/guardian's education level. The results are presented in Table 1, providing a snapshot of the sample's diversity. This information helps understand the participants' background and contextualize the findings on teacher support and academic resilience.

Table 1

Background Characteristics of Students

Variable	Category	Frequency	Percent
Sex	Male	138	42.7
	Female	185	57.3
	Total	323	100.0
Age group	15-18 years	241	74.6
	Above 18 years	82	25.4
	Total	323	100.0
Parent/ Guardians'	Non-formal	8	2.5
Level of Education	Primary Education	91	28.2
	Secondary Education	162	50.2
	Tertiary	62	19.2
	Total	323	100.0

The results presented in Table 1 offer a snapshot of the demographic characteristics of the students that participated in the study. Notably, the majority of students (57.3%) were female, while males comprised 42.7%. While females constituted a larger percentage, the representation of males was still substantial, with a relatively small difference of 14.6% between the two groups. This ensured that the perspectives of both male and female students were adequately captured. The age distribution shows that most students (74.6%) fell within the 15-18 age range, with 25.4% above 18 years old; aligning with the study's target age group. The analysis of parent/guardian education levels revealed a diverse range of educational backgrounds, with 50.2% having secondary education, 28.2% primary education, 19.2% non-formal education, and 2.2% tertiary education. The results on students' education levels reveal that many came from families with limited educational backgrounds, which presented additional challenges in their academic journey, including limited guidance, financial constraints, and restricted access to quality resources.

Consequently, the student population studied was well-suited for assessing resilience, as it reflects the difficulties these learners face.

Measurement Models

To determine the suitability of the data for structural equation modelling, measurement models (Tables 2 and 3) were developed and tested. These models included validity assessments using Average Variance Extracted (AVE) and heterotrait-monotrait (HTMT) tests, as well as reliability evaluations using Cronbach's alpha (α) and Composite Reliability (CR) tests. Additionally, the Variance Inflation Factor (VIF) was calculated to detect any potential issues with multicollinearity between independent variables, ensuring their appropriateness for structural equation modelling. The results of these tests are presented in Tables 2 and 3, providing a comprehensive evaluation of the data's fitness for further analysis.

Table 2

AVE and Heterotrait-Monotrait (HTMT) Ratio Correlations Variables

Measures	AVE	SAR	HSB	PSV	
SAR					
HSB	0.653	0.360			
PSV	0.548	0.859	0.811		
Measures	AVE	TSP	ACC	INV	PRD
TSP					
ACC	0.589	0.602			
INV	0.612	0.459	0.511		
PRD	0.562	0.837	0.830	0.875	

Key: ACC= Accessible; HSB = Help seeking behaviour; INV = Invested; PSV = Perseverance; PRD = Positive Regard; SAR = Student Academic Resilience; TSP = Teacher Support

Table 2 shows that the Average Variance Extracted (AVE) results indicate that the constructs measuring teacher support and students' academic resilience demonstrated convergent validity, with AVE values exceeding the minimum threshold of 0.5 (Shrestha, 2021). This suggested that the indicators accurately represented their respective constructs. Convergent validity assesses the degree of relationship between measures of a latent variable, ensuring that measures of the same concept are related (Sürücü & Maslakç, 2020). Furthermore, the Heterotrait-Monotrait (HTMT) ratios of correlation, which evaluate discriminant validity, indicate that the constructs studied are independent and their indicators specifically defined each construct. This is because all HTMT values fell below the maximum threshold of 0.90 (Hair Jr. et al., 2021), confirming discriminant validity. This meant that the measures

distinctly captured each variable, and the data collected was suitable for structural modelling.

Table 3

Reliabilities and Value Inflation Factor for Study Constructs

Measures	α	CR	VIF
Help Seeking Behaviour	0.468	0.790	1.047
Perseverance	0.725	0.829	1.047
Accessible	0.649	0.811	1.241
Invested	0.682	0.825	1.289
Positive Regard	0.740	0.837	1.206

Table 3 presents the reliability test results, which indicate that the measures of the constructs demonstrate high reliability. Both Cronbach's alpha (α) and composite reliability (CR) values exceed the threshold of 0.70, confirming the reliability of the measures. Notably, composite reliability was used in addition to Cronbach's alpha, as the latter can be sensitive and assume equal traits across the population, potentially lowering reliability values. In contrast, composite reliability is more liberal, accommodating outer traits and ensuring a higher number of reliable indicators (Hair Jr. et al., 2020). Furthermore, the results show no evidence of collinearity between the variables, as the Variance Inflation Factor (VIF) values, which measure linearity, are all below 5 (Marcoulides & Raykov, 2019). This indicates that the indicators of the various constructs were reliable.

Structural Equation Model for Teacher Support and Students' Academic Resilience

To investigate the impact of teacher support on students' academic resilience, a structural model was developed to examine the causal relationships between teacher support and academic resilience. The model tested three hypotheses to the effect that; teachers' investment (H_1), positive regard for students (H_2), and teacher accessibility (H_3) have a significant influence on students' academic resilience. The results of the structural model are presented in Figure 1 and the path estimates are shown in Table 3.
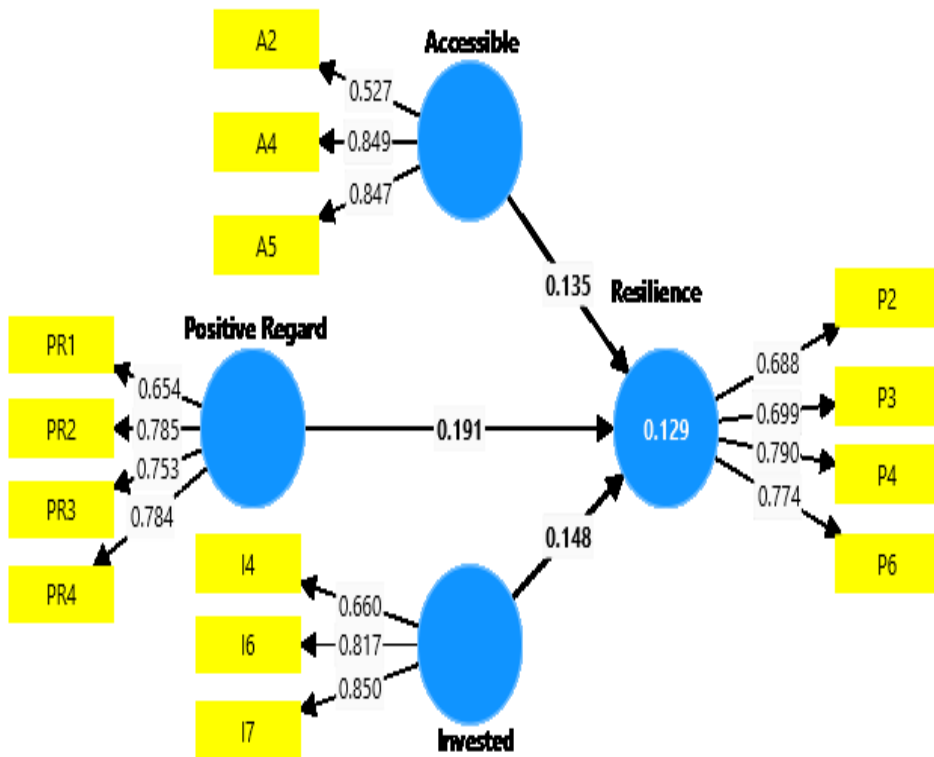
Figure 1

Structural Model for Teacher Support and Student Academic Resilience

Figure 1 presents a structural model illustrating the relationship between teacher support and students' academic resilience. The model reveals that teacher support consists of three components: accessibility, positive regard, and investment of effort in students. For accessibility, three out of five indicators (A2, A4, and A5) loaded above the threshold level, while two indicators (A1, A3) did. For positive regard, four out of five indicators (PR1, PR2, PR3, PR4) loaded above the threshold, with only one indicator (PR5) not meeting the threshold. For teacher investment of effort in students, three out of eight indicators (I4, I6, I7) loaded above the minimum level, while five indicators (I1, I2, I3, I5, I8) did not. Students' academic resilience comprises three components: perseverance, help-seeking behaviours, and positive affect. For perseverance, four out of seven indicators (P2, P3, P4, P6) loaded above the minimum level, while three indicators (P1, P5, P7) did not. However, none of the indicators for help-seeking behaviours and positive affect loaded above the minimum level of 0.40 (Hair Jr. et al., 2020) suggesting that students' academic resilience was in terms of perseverance. All indicators that did not meet the threshold value were removed from the model. Table 3 presents the results of

testing three hypotheses: (H₁) accessibility influences students' academic resilience, (H₂) investment of effort in students influences their academic resilience, and (H₃) positive regard influences students' academic resilience.

Table 4

Structural Equation Model Prediction for Teacher Support and Student Academic Resilience

	B	Mean	STD	T	P
Accessible -> Resilience	0.135	0.144	0.061	2.213	0.027
Invested -> Resilience	0.148	0.152	0.065	2.271	0.023
Positive Regard -> Resilience	0.191	0.201	0.054	3.515	0.000
$R^2 = 0.129$					

Table 3 presents the structural equation estimates, which revealed that all three teacher support aspects, namely accessibility ($\beta = 0.135$, $p = 0.027$), investment ($\beta = 0.148$, $p = 0.023$), and positive regard ($\beta = 0.191$, $p = 0.000$) had a positive and statistically significant impact on students' academic resilience. The R^2 value indicated that these aspects collectively explained 12.9% of the variance in students' academic resilience. The beta coefficients showed that positive regard had the most significant influence on academic resilience, followed by investment and accessibility. Therefore, promoting positive regard is crucial for fostering academic resilience, followed by teacher investment and accessibility. This finding highlights the importance of teacher support in promoting students' academic resilience, with positive regard being the most critical aspect.

Discussion

The finding that teacher support in terms of accessibility, teacher investment and positive regard has a positive significant influence on student academic resilience highlight the significant impact of teacher support on students' academic resilience. However, positive regard has the most significant role in promoting academic resilience, followed by investment and accessibility. The importance of teacher support in influencing students' resilience is consistent with the proposition of Piaget's (1936) cognitive constructivist theory that teacher support plays a crucial role in shaping students' attitudes and academic outcomes. Moreover, the study's findings are consistent with previous research in the field. For instance, Mu et al. (2017) found that teachers who provided strong support fostered resilience in students. Similarly, Ma (2021) also found that autonomy-supportive teachers who offered guidance, feedback, and praise enhanced students' resilience. Additionally, Mwangi et al. (2017) reported a strong correlation between external protective factors, including teacher support, and students' academic resilience.

Further, consistent with the finding of the study, Nečasová (2021) established a positive and significant influence of teacher support on students'

resilience. In the same vein, Permatasari et al. (2021) reported that teacher support makes a substantial contribution to students' resilience, while Radhamani and Kalaivani (2021) discovered a positive and significant relationship between perceived teacher emotional support and student resilience. Also, Romano et al. (2021) established a strong positive association between perceived teacher emotional support and academic resilience. In addition, Rosenberg et al. (2018) reported that teacher support contributes to the resilience of students. The convergence of these findings suggests the critical influence of teacher support on students' academic resilience. Therefore, it can be inferred that teacher support significantly impacts students' academic resilience.

Conclusion

The study findings led to the conclusion that teacher support in terms of teachers being invested in students, having positive regard for them and being accessible to them promotes students' academic resilience. However, positive regard plays the most significant role in promoting academic resilience, followed by investment and accessibility. Teachers are invested in students' investment when they are helpful to students when they have questions about school issues, understand students' strengths, and support their future endeavours. Positive regard is demonstrated when teachers make students feel valued by acknowledging their hard work, share positive comments about them with others, show confidence in their intelligence, and display enthusiasm for having them in class. Accessibility involves teachers being approachable and available to students, providing them extra help when needed, and being easy to talk to about school-related matters. By providing teacher support in these forms, teachers can significantly promote students' academic resilience, with positive regard being the most critical aspect.

Recommendations

Head teachers should sensitise teachers to provide comprehensive support to learners by fostering a supportive learning environment that involves being invested in their students' academic, being accessible and showing positive regard for them. Thus, teachers should be sensitised about being invested in students by being helpful to them regarding school issues, understanding their individual strengths, and supporting their future goals. In addition, teachers should be encouraged to show positive regard by acknowledging students' hard work, sharing praise with others, conveying belief in their intelligence, and demonstrating enthusiasm for having them in class. Furthermore, teachers should be accessible, being approachable for discussions about school matters, providing extra help when needed, and being available to support their learning journey.

Limitations

This study highlights the crucial role of teacher support in promoting students' academic resilience, but some limitations were identified. Notably, the study involved only secondary school students. Therefore, future researchers should consider other populations including students in private schools and higher education settings, to enhance validity of the findings. Further, this study relied solely on quantitative methods for statistical inferences. This may not have captured the full complexity of the phenomenon. Future studies should consider incorporating mixed-methods or qualitative approaches to provide a more in-depth and clear understanding of academic resilience. By addressing these limitations, future research can build upon this study's findings and provide a more comprehensive understanding of the factors that contribute to academic resilience.

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