

Academic Resilience and Self-Concept as Correlates of School Satisfaction among Form Two Students in the North East Region of Botswana.

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ABSTRACT

There is paucity of studies on academic resilience, academic self-concept and school satisfaction in the North East Region, Botswana. Available studies globally revealed inconsistent findings on school satisfaction over the years. The research goal was to examine the correlation between academic resilience, academic self-concept and school satisfaction. The study was anchored on Flach's Theory of Resilience and the Self Determination Theory. It targeted 3514 form two students in the 18 public Junior Secondary Schools in the North East Region, Botswana. Proportionate stratified and simple random sampling were used to select 450 respondents across 9 junior secondary schools to fill self-report measures. Academic Resilience Scale (ARS-6), Academic Self-Concept Questionnaire and the School Satisfaction Subscale from the Multidimensional Student Life Satisfaction Scale were used. Data was analysed using Pearson product moment correlation coefficient. The results revealed a significant, positive, albeit weak relationship between, academic resilience ($r(444) = .20, p < 0.01$) and academic self-concept ($r(444) = .26, p < .01$) with school satisfaction. Further moderation analyses reveal that the relationships between academic resilience, academic self-concept and school satisfaction were weaker for females compared to males. The findings have implications for teachers, counselors and parents to integrate and infuse academic resilience and academic self-concept in different subjects and school activities so as to evoke student's satisfaction with school.

Keywords, Academic Resilience, Academic Self-Concept, School Satisfaction

INTRODUCTION

School satisfaction is an important indicator of education quality (Simonsen & Rundmo, 2020). School satisfaction refers to the student's cognitive-affective assessment of learning, educational activities, and their interest in school (Schnettler et al., 2017). Learners that are satisfied with school have the interest to attend lessons and enjoy activities in class (Than & Khaing, 2020). There is consensus in literature that learners who report higher degrees of school satisfaction are happier while in school, have more positive cognitive evaluations of these institutions, and are psychologically healthier (Yam, 2020). Disinterested students, on the contrary, are less likely to attend lessons regularly, which consequently results in poor performance, low levels of engagement in learning and drop out of school (Parveen & Sadiq, 2019;

Simonsen & Rundmo, 2020; Weber & Harzer, 2022). The foregoing may give evidence that school satisfaction is important for attendance, academic performance, and enjoyment of school among others.

Findings of The Good Childhood Report (2021), in the United Kingdom, have revealed that children's satisfaction ratings with school have been steadily declining since 2010 attributed to disparity in terms of school and individual learners' values, authoritative rules, and pressure at school. Similarly, other findings on Australian, American, and Slovakian samples attributed a decline in school satisfaction to poor student-teacher relationships (Graham et al., 2022), students' lack of freedom in their studies (McDonald, 2021) and negative attitudes towards learning (Horanicova et al., 2022). Similar findings reported in Nigeria and Ethiopia were linked to poor service quality in universities (Iruloh & Ugwu, 2017; Lodesso et al., 2018). Low student satisfaction with school was reported amongst both the girls and boys (The Good Childhood Report, 2021; Hossain et al., 2019; McDonald, 2021; Saleh, 2019).

In addressing declining student satisfaction, several strategies have been employed ranging from restructuring Guidance and Counselling Programs, reviewing the school curriculum (Parveen & Sadiq, 2019) as well as introducing the Pastoral Programme in schools to improve the student's welfare (Pastoral Policy, 2008). Overall, these strategies point to the centrality of students' psychological wellbeing in enhancing student's satisfaction in schools.

Despite the global body of research on academic resilience, academic self-concept and satisfaction, there is dearth of information specific to the African context, particularly Botswana and its North East Region. However, contrary findings have been reported by studies on school satisfaction around the world which could be due to cultural differences limiting the generalizability of such studies. Research on school satisfaction in Africa has mainly been done in relation to quality service delivery and online learning in universities including Botswana. Existing studies on school satisfaction in Botswana are outdated (Keagakwa, 2009; Tella, 2012) and focused primarily on higher education, leaving a gap in understanding the current dynamics within junior secondary schools. This paucity of contextual research is problematic given that educational experiences are deeply embedded in socio-cultural systems.

Specifically, the North East Region has over time experienced reduced lesson attendance as well as rising cases of drop out due to truancy (Jacobz, 2015; North East Region, 2018-2022). As indicated in the 2018 to 2022 data, the dropout rate due to truancy has been on the rise, with averages between 3.95% and 6.98% in comparison to other regions that perform poorly in national examinations (Department of Special Support Services Reports, 2018-2022; North East Region, 2018-2022). Further, the Ministry of Basic Education (2021) has reported bullying as a problem among secondary schools pointing to a likelihood of low school satisfaction. This has also been reported in the North East Region leading to drop outs in private schools (Keletsositse, 2021).

Academic Resilience, Academic Self-Concept and School Satisfaction

Academic resilience is good indicator of a number of favorable outcomes, including enjoyment of schooling (Reeve et al., 2020). Academic resilience is explained as the learner's capacity to manage academic failures, stressful events, and the pressure to perform well (Beri & Kumar, 2018). Students who are resilient experience higher school satisfaction levels because they re-engage, have a positive attitude, and believe they can solve the problem (Imafuku & Akatsunka, 2022). Students with low academic resilience experience feelings of helplessness and stress, (Frisby & Vallade, 2021). This may imply that a negative assessment of the learning environment may bring about the onset of a decline in school satisfaction when students believe they are not in control of the challenges.

Findings by several studies globally (Ebulum and Chidiobi, 2016; Aldrige et al., 2020; Ndata and Akunna, 2022; Wang et al., 2022) have revealed a correlation between resilience and school satisfaction. The results

were attributed to student's home and family environment, how they responded to situations and re-evaluated their interpersonal experiences which enhanced their satisfaction. This may imply that when students become persistent in finding solutions that helps them attain their educational goals, they experience enjoyment in school. There is scarcity of information on academic resilience and school satisfaction in Botswana and the North East Region. Studies on school satisfaction in Botswana are outdated (Keagakwa, 2009; Tella, 2012) and only focused on on-line learning at university. Therefore, academic resilience as a correlate of school satisfaction remained largely unexplored in this context.

The research studies offers support for Flach's Theory of Resilience (1989) which stresses that in a school, adversity provides a chance for learners to deal with issues, acquire new coping mechanisms, and reconstruct the way they view life. Students may be disrupted by academic failures, unpleasant teacher comments and study pressure which may impact on their satisfaction with school. Students may try to regain their composure by using a range of problem-solving skills to achieve good educational outcomes like school satisfaction despite the setbacks (Flach, 1989). Persistence to find solutions to challenges helps students to enjoy school (Popelkova, 2020).

Academic self-concept, on the other hand, is described as the student's self-perception of his/her abilities to learn (Rost & Feng, 2024). A positive academic self-concept has been correlated to higher degrees of enjoyment of school, attendance and competency amongst students (Prehn et al., 2021). Studies in India and Slovakia revealed that academic self-concept is correlated to school satisfaction (Bharathi, 2020; Joshna & Kiran, 2021; Popelkova et al., 2020). The foregoing implies that when students view themselves as competent they become confident and they work really hard to achieve their goals and this enhances their satisfaction with school. Paechter et al. (2023) attributed this to the positive achievement emotions experienced by the students when they excel in given tasks hence view learning as exciting. Research on academic self-concept and school satisfaction in Africa, Botswana and the North East Region is scarce. There was a need for a study to ascertain academic self-concept as a correlate of school satisfaction in the cultural context of Botswana to provide additional perspectives.

This literature offers support for the Self Determination Theory (Deci & Ryan, 2000), which posits that fulfillment of basic psychological needs being autonomy, competence, and relatedness fosters positive school outcomes including school satisfaction. If students are given opportunities to play a part in their own learning their need for autonomy may be satisfied hence they may enjoy their learning (Perlman & Webster, 2011) and have their academic self-concept enhanced. The need to belong may be satisfied when a student works well with peers and teachers. When students feel attached to others, they are most probably to be interested in educational tasks and succeed (Gempp & Gonzalez-Carrasco, 2021). The need for competence may be enhanced when students receive academic support to complete learning tasks (Zullig et al., 2011). When they develop confidence in completing tasks, this may positively affect their academic self-concept.

However, the universality of the relationship between academic resilience, academic self-concept and school satisfaction cannot be assumed. Cultural differences in educational norms may modulate the interplay between the constructs. Further, the moderation of gender in the relationship is a relatively underexplored and subject to cultural variations. In Botswana, the perennial dropout rates due to truancy (Sebobi & Kelepile, 2022; The Secondary School Statistics Brief, 2022), recent reports of strained teacher-student relationships (Sereri, 2021; Dube, 2023) and peer bullying (Ministry of Basic Education, 2021) even in the North East Region leading to drop outs (Keletsositse, 2021) suggest potential threats to students' satisfaction with school. The foregoing means that such incidents may undermine student's perceptions on academic resilience and academic self-concept, possibly diminishing school satisfaction.

Thus, it is from the foregoing the following hypotheses was proposed:

Ha₁ There is a correlation between academic resilience and school satisfaction.

Ha₂ There is a correlation between academic self-concept and school satisfaction

H_{a3}: Gender moderates the relationship between academic resilience and school satisfaction.

H_{a4}: Gender moderates the relationship between academic self-concept and school satisfaction.

MATERIALS AND METHODS

Research Design

A correlational research design was employed in the study given that it aims to determine the direction and strength of linear relationships among variables (Thomas and Zubkov, 2023).

Participants and Procedures

The study targeted 3514 form two students in the North East Region, Botswana. A sample of 450 (233 female, 217 male) respondents were selected from 9 junior secondary schools. The students' ages ranged between 13 and 18 years ($M = 14.93$ $SD = 0.78$). Proportionate stratified sampling was used to select the number of students according to gender, participating day and boarding schools. Simple random sampling was used to select individual respondents. Administration of the questionnaires was done during study time.

Ethical Statement

A research permit was sought from the North East Regional Education Office upon an authorization letter from the Kenyatta University graduate school. Informed consent was sought from the students' parents since a majority of the learners were below 18 years, and the students signed the assent letters. Respondents were taken through the study procedures and benefits. During the whole exercise, anonymity and confidentiality principles were adhered to.

Instruments

Academic Resilience Scale (Martin and Marsh, 2006)

The Academic Resilience Scale (ARS-6) by Martin and Marsh (2006) was adopted and used to measure academic resilience. The instrument is openly available for use by researchers. It had six items evaluated from $1 = \text{strongly disagree}$ to $7 = \text{strongly agree}$ on a Likert scale. The answers were added up to give an overall score for academic resilience that ranged from 6-42. A higher level of academic resilience is reflected by a higher score. The original Cronbach's Alpha for the scale is .89.

Academic Self-Concept Questionnaire (Marsh, 1990)

Academic Self-Concept Scale (ASCQ) by Marsh (1990) was adopted. The instrument is available in the public domain for use. The scale comprised of six items, assessed from $1 = \text{completely disagree}$ to $5 = \text{completely agree}$ on a Likert scale. The possible scores range from 6-30. A higher score reflects a high academic self-concept. It took 2 minutes to complete. The scale's overall Reliability Co-Efficient is .73 to .89.

School Satisfaction Scale (Huebner & Furlong, 2016)

The School Satisfaction Subscale of the Multidimensional Student's Life Satisfaction Scale (Huebner &

Furlong, 2016) was used. The School Satisfaction Subscale comprises of five items, rated from 1 = *strongly disagree* to 6 = *strongly agree* on a Likert scale. Scoring involved average scores with a possible range between 1 and 6. A high rating on the subscale indicates that the respondent is having higher school satisfaction. The original internal consistency coefficients range from .70 to .90.

Validity and Reliability of the Research Instruments

The researcher liaised with supervisors and peers from the Department of Educational Psychology to ascertain content validity of the tools (Surucu & Maslakci, 2020) and they advised that the measures incorporated the various elements of the constructs as operationally defined. Therefore, the tools were found to be appropriate for use in the study.

Reliability was assessed through the internal consistency method to check the Cronbach's Alpha. In line with recommendations by Taber (2018) the minimum acceptable coefficients should be $\alpha = .70$ and above. The study adopted measures which have undergone validation and have had high usability rates in research across cultures. The findings are reported in Table 1.

Table 1: Reliability Coefficients of the Instruments

Scale	Items	Author's α	Current α
Academic Resilience Scale, ARS-6	6	.89	.70
Academic Self Concept Questionnaire, ASCQ	6	.89	.71
School Satisfaction Scale	5	.90	.76

As noted in Table 1, all the instruments were within the recommended benchmark of $\alpha = .70$ and above denoting that the instruments were reliable measures of the constructs.

DATA ANALYSIS

The negatively worded item in the Academic Self-Concept Questionnaire was reverse coded. Data was analyzed using the Statistical Package for Social Sciences (SPSS) Version 25. Using the Pearson's Product Moment Correlation Coefficient (r) the hypotheses were tested at 0.05 alpha level of significance.

Descriptive Analyses

Descriptive analyses of the variables were assessed. The findings are outlined in Table 2.

Table 2: Descriptive Statistics

Scale	Range	M	SD	Sk	Kur
Academic Resilience Scale (ARS-6)	1.33- 7.00	4.63	1.09	-0.16	0.23
Academic Self Concept Questionnaire (ASCQ)	1.00 -5.00	3.31	0.76	-0.18	-0.20
School Satisfaction Scale	1.00 – 5.00	4.90	0.92	-1.09	1.48

Findings show that slightly above average academic resilience ($M = 4.63$, $SD = 1.09$), academic self-concept ($M = 3.31$, $SD = 0.76$) and school satisfaction ($M = 4.90$, $SD = 0.92$). Overall, more students had higher scores that the average score across all variables as reflected in the slight negatively skewed distributions.

Hypothesis Testing

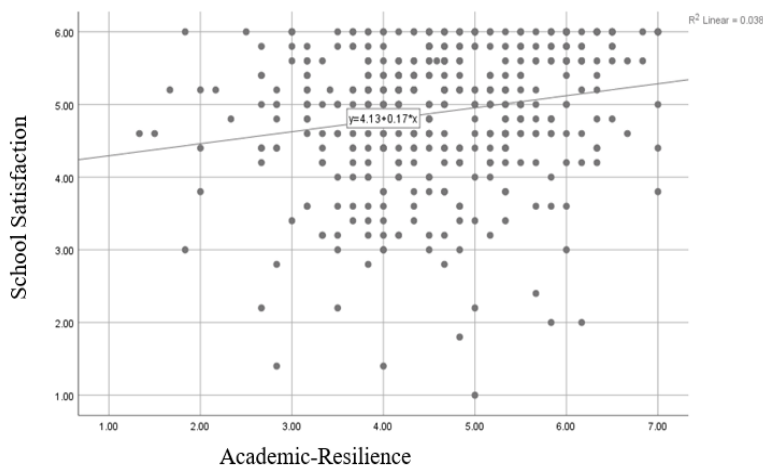
The present study sought to determine the correlation between academic resilience, and academic self-concept with school satisfaction. To test the association between the variables, two null hypotheses were formulated in line with the objective.

H_{01} : There is no significant relationship between academic resilience and school satisfaction.

H_{02} : There is no significant relationship between academic self-concept and school satisfaction.

Prior to testing the association, a scatter plot was generated to assess the pattern of association between the variables graphically. This is illustrated in Figures 1 and 2.

Figure 1: Association Between Academic Resilience and School Satisfaction



As can be observed, the distribution of scores shows an averagely linear distribution with no extreme scores or curvilinear patterns. Further, observing the guidelines specified by Ben-Shachar et al. (2020) where an effect size of $r^2 = 0$ to .10 is regarded as a small effect size; $r^2 = .11$ to .25 is medium and $r^2 = .26$ to .50 as large, it is noted that there was a small effect size of $r^2 = 0.04$. This indicated that academic resilience accounted for 3.8% of the change in school satisfaction.

Figure 2: Association Between Academic Self Concept and School Satisfaction

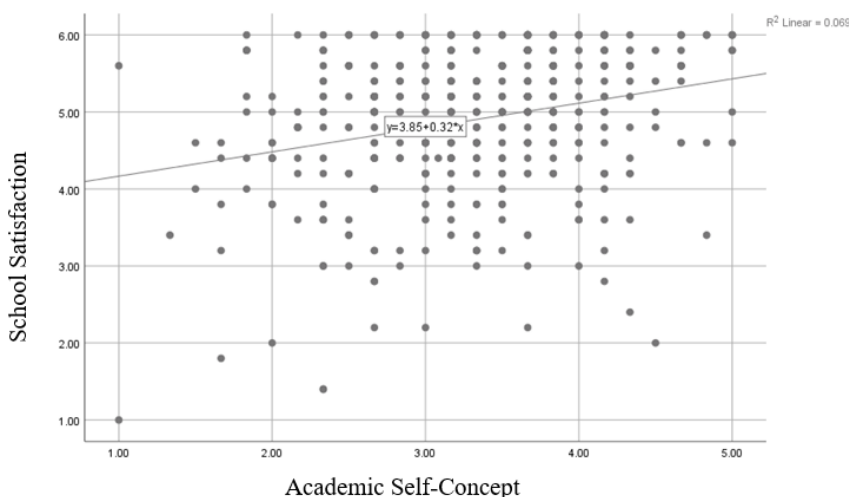


Figure 2 shows an almost similar pattern as above, where academic self-concept had an effect size $r^2 = 0.07$. This showed that 6.9% of the change in school satisfaction was accounted for by the students' academic self-concept.

A bivariate correlation test was subsequently undertaken. Findings are highlighted in Table 3.

Table 3: Relationship between the variables

School Satisfaction	
Academic Resilience	.20**
Academic Self-Concept	.26**

Note: ** = Correlation significant at .01 level (2-tailed)

Table 3 shows a weak but statistically significant positive relationship between academic resilience and school satisfaction, $r(448) = 0.20$, $p < 0.01$. This suggests that as academic resilience increases, so does the level of school satisfaction among learners. Similarly, there was a weak but statistically significant positive association between academic self-concept and school satisfaction, $r(444) = 0.26$, $p < 0.01$. This indicates that higher academic self-concept is linked to greater school satisfaction, with academic self-concept showing a slightly stronger association than academic resilience. Consequently, the null hypothesis was rejected. These findings implied that other variables outside the current study account for the gap in school satisfaction.

The role of gender in these relationships was further assessed to understand the dynamics of the relationships. The probable moderation of gender was assessed. Table 4 shows the descriptive on the variables by gender

Table 4: Descriptive Statistics on the Variables by Gender

	Male			Female		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Academic Resilience	216	4.69	1.08	230	4.59	1.10
Academic Self Concept	216	3.32	0.73	230	3.30	0.80
School Satisfaction	216	4.88	0.91	230	4.90	0.94

Table 4 shows that boys exhibited slightly higher academic resilience ($M = 4.67$, $SD = 1.08$) compared to girls ($M = 4.59$, $SD = 1.10$), with girls displaying a greater variability in their scores. Similarly, boys had marginally higher academic self-concept levels ($M = 3.32$, $SD = 0.73$) than girls ($M = 3.30$, $SD = 0.80$), though girls again showed a wider dispersion of scores. However, girls had higher scores in school satisfaction ($M = 4.90$, $SD = 0.94$) as compared to boys ($M = 4.88$, $SD = 0.91$).

Hypothesis Testing

To test this hypothesis on the moderation of gender, two supplementary hypotheses were formulated.

H₀₃: There is no significant moderating role of gender in the relationship between academic resilience and school satisfaction.

H_{04} : There is no significant moderating role of gender in the relationship between academic self-concept and school satisfaction.

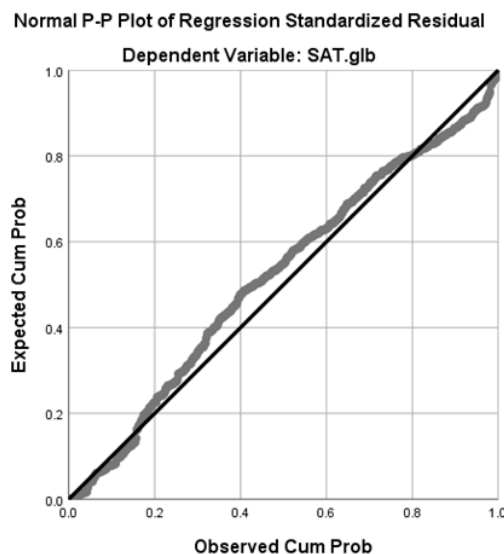
A test for assumptions of multicollinearity and singularity was done. Tabachnick and Fidell (2019) point out that the tolerance values are recommended be a closer to 1, whilst the Variance Inflation Factor (VIF) values should be below 10. An analysis of the VIF and Tolerance values is presented in Table 5.

Table 5: Assumption of Multicollinearity and Singularity

	Tolerance	VIF
Academic Resilience	.85	1.17
Academic Self-Concept	.86	1.16

Findings on Table 5 demonstrates that in adherence to the assumption of multicollinearity all items ranged between .85 and .86 for tolerance values and 1.16 to 1.17 for the VIF values which are well within the recommended benchmarks. Subsequently, the normality probability plot, was generated to assess the linearity of the distribution. Findings are summarized in Figure 3.

Figure 3: Normality Probability Plot



As noted, the plot had approximately straight line which implies a linear distribution (Wiśniowski et al., 2020) To test the hypotheses on the moderating role of gender on the aforementioned relationships, a multiple regression analysis on the individual relationships was conducted. The findings are summarized in Table 6.

Table 6: Regression Coefficients for the Moderation Effect of Gender

		Unstandardized Coefficients		Standardized	<i>t</i>	<i>Sig</i>
			<i>SE</i>	β		
ARS Model	(Constant)	4.05	0.28	—	14.72	.000
	ARS	0.18	0.06	.21	0.41	.002
	Gender	0.16	0.38	.08	0.41	.043

	Gender*ARS	-0.02	0.08		-.06	.048
ASC Model	(Constant)	3.51	0.28	–	12.39	.000
	ASC	0.42	0.08	.35	1.97	.000
	Gender	0.61	0.38	.33	1.62	.017
	Gender*ASC	-0.18	0.11	-.34	-1.60	.011

Note. *ARS* = Academic Resilience; *ASC* =Academic Self- Concept.

Findings in Table 4 indicate that gender moderates the relationships between academic resilience ($\beta = -0.02$, $p < .05$), academic self-concept ($\beta = -0.18$, $p < .05$) and school satisfaction. These findings indicate that the relationships between academic resilience, academic self-concept and school satisfaction were weaker for females compared to males.

DISCUSSION OF FINDINGS

The study established that academic resilience and academic self-concept had a significant positive, albeit weak, relationship with school satisfaction. These results resonate with previous studies.

The present study's findings on the relationship between academic resilience and school satisfaction support previous research (Aldridge et al., 2020; Haktanir et al., 2021; Ndata and Akunna, 2022; Wang et al., 2022) which examined the relationship between resilience and life satisfaction among university students. These studies revealed a positive correlation between resilience and life satisfaction. This indicates that learners who are academically resilient are more likely to enjoy school and excel in their learning as they remain focused on dealing with challenges they face. The results support Flach's Theory of Resilience (1989), which stresses that students who are academically resilient can easily discover solutions to problems, restructure their perceptions about schooling, and regain their composure, enabling them to enjoy school. Even though previous studies focused on general constructs, the results also showed that students in different cultural contexts and educational levels had similar perspectives on the constructs. Therefore, a high level of academic resilience is crucial in promoting students' satisfaction with school.

Regarding the link between academic self-concept and school satisfaction, the results were positive, weak, and significant. The findings support those by Bharathi (2020), Joshna and Kiran (2021), Popelkova et al. (2020), and Shah (2023), which aimed to determine the correlation between academic self-concept and students' life satisfaction. A significant, positive association was established between academic self-concept and school satisfaction. Even though the study samples were smaller than that of the current study and were from different cultural contexts, similar results were reported. The study highlighted that when students realize they are doing well in learning activities compared to their peers, they feel encouraged, which plays a role in shaping their academic self-concept and betters their school satisfaction. These results resonate with the Self-Determination Theory (Deci & Ryan, 2000), which posits that learners who view themselves as competent are more likely to be actively involved in learning activities, leading to school satisfaction.

The third and fourth hypotheses sought to establish the moderating role of gender in the relationship between academic resilience, academic self-concept, and school satisfaction. Findings indicate that the relationships between academic resilience and academic self-concept with school satisfaction were stronger for boys as compared to girls. In an earlier study Faturromah and Sagita (2023) posit that these differences may be due to boys being more optimistic and satisfied with their lives than girls, suggesting that girls may need more support. Conversely, a higher number of girls had moderate levels of academic self-concept than boys. In terms of school satisfaction, boys had a higher levels than girls. Marquez (2023) attributes this to school work-related anxiety that affects girls more than boys and the prevailing norms in a given society.

There is scarce literature on the moderating role of gender in the relationship between academic resilience and school satisfaction. Therefore, this study adds to the body of knowledge on the constructs examined, as the results showed that gender moderated the link between academic resilience and school satisfaction. These findings show that the direction and strength of relationships between academic resilience and school satisfaction change due to respondents being either male or female. These differences may be due to socialization processes and gender-role expectations. The results seem to reinforce both typical gender stereotypes and norms in societies.

Regarding the moderating role of gender on the link between academic self-concept and school satisfaction, the findings revealed that gender moderated the relationship. Gender increased the likelihood of students being satisfied with school, with males reporting higher levels in academic self-concept and school satisfaction. These results align with the notion that boys are taught to be more individualistic and resilient. The findings concur with those of a similar study by Okyere (2019) in Ghana among 119 grade 8 students, which showed that gender had a substantial influence on learners' Mathematics performance and self-concept. Similarly, Wang and Yu (2023) evaluated 53 studies, and their findings show that gender moderates the correlation between academic self-concept and achievement. The current study adds to the body of knowledge in the field on the constructs studied, as related literature examined the moderating role of gender on the relationships between self-concept as a general construct and achievement.

CONCLUSIONS

Academic resilience and academic self-concept were found to be significantly linked to school satisfaction. Therefore, the study concludes that students who were academically resilient and those with a high academic self-concept were satisfied with school. Gender moderated the relationships between academic resilience, academic self-concept, and school satisfaction. It is concluded that the students' academic resilience and academic self-concept in relation to school satisfaction were determined by being either male or female.

RECOMMENDATIONS

Based on the findings, several recommendations can be made for both practice and future research. In terms of practice, educators should focus on integrating academic resilience and self-concept skills into their teaching across various subjects. This integration, coupled with collaborative learning approaches, can enhance students' competencies and ultimately improve their satisfaction with school. School counselors play a crucial role in this process and should work closely with parents and other stakeholders to establish effective support systems and peer mentoring programs. These initiatives can help foster higher levels of academic resilience and self-concept among students.

Given the study's finding that gender moderates the relationships between academic resilience, self-concept, and school satisfaction, it's important to develop targeted empowerment programs for both girls and boys. These programs should aim to address existing gender gaps and ensure that all students have the opportunity to develop strong academic resilience and self-concept.

For future research, it's recommended that studies move beyond self-report measures and incorporate a variety of data collection methods. This could include interviews, hypothetical scenarios, vignettes, and focus group discussions, which would provide a more comprehensive understanding of the variables at play. To establish causal relationships, researchers should consider employing experimental, quasi-experimental, or mixed method designs in other regions of Botswana. Additionally, expanding the scope of research to include students from different grade levels in secondary schools, primary schools, and tertiary institutions

across various regions in Botswana would provide a broader perspective on these important educational factors.

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