

IMPACT OF GENDER AND RELIGION ON THE RELATIONSHIP BETWEEN AGE AND LEARNERS' CARE IN PRIMARY SCHOOLS: A MODERATION ANALYSIS

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Abstract

This study examined the moderating roles of gender and religion on the relationship between age and learners perceived care in selected primary schools in Oyo State, Nigeria. Underpinned by Bronfenbrenner's Ecological Systems Theory, the study utilised correlational research design. The population of the study consists of learners in primary schools in a selected Local Government Area (LGA) in the sampled State. A multistage sampling procedure was used in selecting the study's sample (394 learners). The Learners' Perceived Care Questionnaire (LPCQ) ($\alpha = 0.81$) was used in collecting data for this study. The data collection process was for three (3) months (November 2024 to January 2025). The data collected for this research were analysed using descriptive (frequency counts and percentages, mean and standard deviation, skewness and kurtosis) and inferential (Hayes macro process V4.0, Model 2) statistics, Null hypotheses were tested at a 5% level of significance. Findings showed that learner's age does not impact their perceived care within classroom and school contexts. Also, there is no substantial variation in learners' perceived care due to the interaction or moderating influence of gender and religion. The study recommended among others that education policymakers and schools should emphasise that care should be based on individual learner needs rather than demographic characteristics, and that primary schools should continue to implement policies that support equal care and support for every learner regardless of gender or religion.

Keywords: Gender, Moderation analysis, Perceived care, Primary school learners, Religion.

Introduction

The Sustainable Development Goals (SDGs) 4, 5 and 10 positions the essence of quality education for all, gender equity and reduced inequalities. These goals, within the education space, are subsumed or fulfilled under the 'care' that learners can access within such spaces. People's social and personal development is greatly influenced by their education, age, gender, religion, and other aspects of culture (Autiero & Vinci, 2016). Schools are social organisations whose members work together to design activities that achieve a certain goal (Turkkahraman, 2015). As a result, the educational system should provide and grow into a safe, compassionate, and humane environment (Osiesi, 2024; Osiesi & Blignaut, 2025; Stentiford et al., 2024). While religious institutions and ideals often influence the moral and ethical frameworks driving care activities, gender dynamics

also influence the expectations and treatment of the young (including learners) (Abidogun, 2017; Boehnke, 2011).

Students' perceptions and academic performance are greatly influenced by gender, which is defined as the psychological and sociological characteristics of being male or female (Fukada et al., 1993; Kutsyuruba et al., 2015; Osiesi & Akomolafe, 2019; Osiesi & Blignaut, 2024; Osiesi et al., 2022). Religious beliefs and gender inequality may affect how young learners view and feel about these care systems or structures within their school settings. Religion is a set of beliefs, practices, and concepts about the nature of life and the cosmos (Sanni et al., 2023; Elsayed et al., 2023; Coman et al., 2024; Walsh, 2017). It typically entails the belief in one or more supernatural or divine beings, which vary across cultures and societies (Sanni et al., 2023).

The term "learner's age" describes the total number of years that have passed between a learner's birthdate and a particular reference date, usually determined as of December 31 of that year (Coman et al., 2024). Numerous cross-sectional studies that link test scores within school grades to age have demonstrated this disparity (Horwitz, 2021; Hukkelberg et al., 2023; Urruticoechea et al., 2021; Aune et al., 2018). Learners must receive proper care to feel good about themselves and develop the abilities they need to succeed in their surroundings, especially in elementary schools (Bjerke et al., 2021; Ballet et al., 2011; Kellock, 2020; Montgomery & Groat, 2021). Recent years have witnessed a rise in discussions and debates about people's mental health and wellness on a global scale (Schopenhauer, 2012; Chandra & Chand, 2018; Mannion et al., 2024). Supporting learners regardless of their learning capacity to enhance instruction both within and outside of the classroom is the aim of learners' care, a subset of school support (OECD, 2021; Rogoff, 2020). It recognises that learners' diverse needs, including their social, emotional, and psychological requirements, are met to create a positive learning environment (Frazier & Doyle Fosco, 2024). Establishing a safe, friendly, and supportive environment where learners feel valued, respected, and motivated to reach their full potential is a top priority for care for learners (Gigengack, 2018; Sanger, 2020; Evans & Saul, 2010; Erel et al., 2000). Educators and the educational system must show that they care about all learners by adapting their lessons to meet these learners' needs, while encouraging positive relationships between learners and teachers (Renkl et al., 2002; Owusu-Ansah & Kyei-Blankson, 2016; Liu & Zhao, 2016; Aggarwal et al., 2023; Meehan, 2019; Guo et al., 2018; Adegboro & Ajayi, 2020; Gilchrist & Zhang, 2023; Setiyawan et al., 2022; Liyanapathirana & Akroyd, 2023; Laksana & Wood, 2019; Charles, 2020; Cui et al., 2019; Simón et al., 2023; Gutman & Feinstein, 2008).

Past research examined the effects of gender and religion on the stress levels of secondary school students in southwest Nigeria who were under stress from tests. Gender and religion were found to have an impact on learners' stated stress levels (Guo et al., 2018; Adegboro & Ajayi, 2020). A similar past study investigated the impact of religion and gender on the ethics of consumer behaviour among Indonesian teens (Gilchrist & Zhang, 2023; Setiyawan et al., 2022; Liyanapathirana & Akroyd, 2023; Laksana & Wood, 2019). The findings indicate a significant relationship between gender and religion and these teens' consumer tendencies. A past study has also shown that religious convictions can strengthen gender biases and stereotypes that impact how boys

and girls are supported and treated in educational settings (Charles, 2020; Cui et al., 2019). Another past study has shown that religiosity did not significantly correlate with psychological health or emotions of wellness, but religious beliefs were a predictor of better psychological well-being among these learners (Chandra & Chand, 2018).

Past study also examined the effects of school and school-related factors on young learners' well-being (Simón et al., 2023; Gutman & Feinstein, 2008). Several studies have explored the moderating impact of religion on a research measure. A study assessed how religious schools affected the relationship between the factors and the involvement of adolescents in spiritual activities (Zhang et al., 2025). The study's findings show that the association between spiritual practices and involvement was significantly and favourably moderated by the religious school. The results of a study reveal that there was no interaction between gender and the link between academic performance and the effectiveness of instruction (Abdullah et al., 2018).

The goal of a similar study was to identify the key determinants of happiness and ascertain if marital status and gender have a moderating influence on the association between happiness and religion among Bangladeshi university students (Nemiño, 2023; Johnson & Morris, 2008). The results show that there was a positively significant correlation between happiness and religiosity, and that gender had a negative but not statistically significant moderating influence between religiosity and happiness. Students' religious affect, life satisfaction, personality, age, gender, and attitudes towards school were evaluated in connection to a school's religious affiliation (Mondal et al., 2024). The results showed that their opinions towards school life are significantly influenced by personality traits and school religious connections. Studies did indicate that gender has a moderating effect on learners' academic endeavours (Yuen et al., 2024; Charoenchai et al., 2020; Vrdoljak et al., 2023).

Bronfenbrenner's Ecological Systems Theory serves as the foundation for this investigation. Uriel Bronfenbrenner proposed this theory in 1977, and it offers a framework for the intricate interactions between different environmental systems that affect a person's growth, actions, and perceptions (Agormedah et al., 2024). This hypothesis can be used to investigate how the gender and religion of Nigerian primary school learners influence how they view the care they enjoy or can access while in school. The religious beliefs and practices of the family and the school itself might have an impact on the child's microsystem, which consists of their immediate surroundings, including their family, school, and peers (El Zaatari & Maalouf, 2022). Because a child's family's religious beliefs and practices can shape their eventual interactions with their family and schools, learners' gender and religion can also have an impact on the mesosystem, resulting from the interactions among the various microsystems (El Zaatari & Maalouf, 2022; Sadownik, 2023). The learning environment and care systems offered in primary schools can also be greatly influenced by the macrosystem, which consists of broader societal structures and cultural norms (Agormedah et al., 2024).

The types of care provided in Sub-Saharan African primary schools, how learners view this care, and how learners' age, gender and religion affect their perceptions of this care are all poorly covered in the extant literature. A novelty that this current study brings.

Moreover, there seems to be no study that has explored the moderating effect of age, gender and religion on primary school learners' perceived care. Therefore, the aim of this study is to investigate the moderating impact of gender and religion on the relationship between age and learners' perceived care in selected primary schools in Oyo State, Nigeria.

Base on the review of the literature and theoretical perspectives of the study, we hypothesise that:

H0₁: Age will not significantly impact learners' care in primary schools;

H0₂: Gender will not significantly moderate the relationship between age and learners' care in primary schools; and

H0₃: Religion will not significantly moderate the relationship between age and learners' care in primary schools.

The conceptualisation of the variables in this study is shown in Figure 1. The figure looks at how age, gender, and religion directly affect learners' perceived care. Additionally, the explains how gender and religion interact or moderate the relationship between age and primary school learners' perceived care.

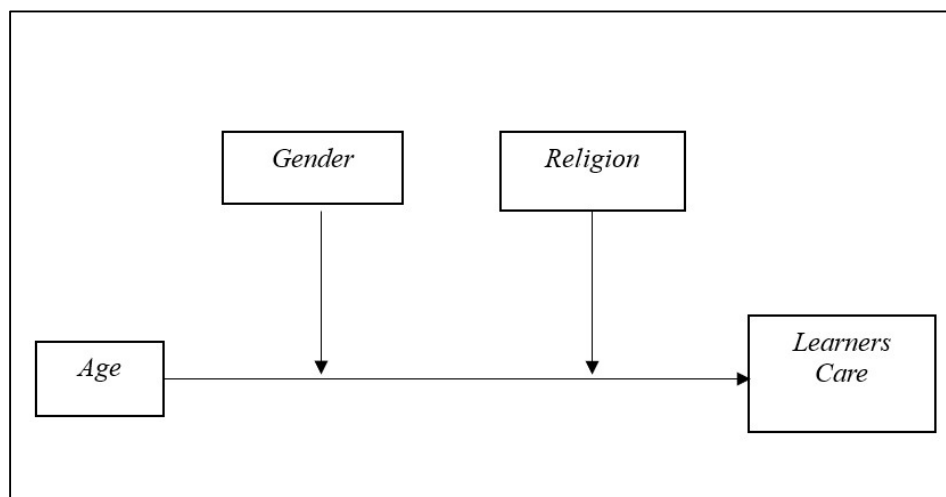


Figure 1: Conceptual Framework

(where Independent: Age, Moderators: Gender and Religion, Dependent: Learners Care)

Methodology

The study adopted a non-experimental design of the correlational research type. This is because no variable was manipulated. The researchers only examined the relationship that existed among the variables. This paradigm supports causal relationships and a basis for generalizable findings (El Zaatari & Maalouf, 2022). The population of the study comprised upper basic primary school learners in Oyo State, Nigeria. The sample for this study was chosen using a multistage sampling technique. Oyo State was chosen as one

of the Southwestern States using the simple random sampling method (simple balloting). A Local Government Area (LGA) of the State (Ibadan North) was chosen using the same simple random technique, and two public primary schools from the same LGA were chosen using the convenience sampling technique (this was because at the time of data collection, schools in the LGA, in line with government-approved timelines were all doing their mid-term assessment/examinations). Three hundred and ninety-four primary school learners (394), who willingly completed the surveys and mailed them back, make up the study's total sample size.

To gather information for this study, the Learners' Perceived Care Questionnaire (LPCQ) was employed. A and B are the instrument's two primary components. The biodata of the respondents, including their class, gender, religion, and school name, is included in Section A. Six sub-sections (i) through (vi) in Section B assessed students' perceived level of care. Students perceived emotional, health, academic, social, personal, and moral care were all taken into consideration. Ten items each, arranged on a 5-point Likert scale of Strongly Agree (5), Agree (4), Undecided (3), Disagree (2), and Strongly Disagree (1), make up these sub-sections. The insights from the literature were used to build the instrument's items (OECD, 2021; Rogoff, 2020; Frazier & Doyle Fosco, 2024; Gigengack, 2018). A similar sample from another LGA (Ibadan East) was used for a pilot test to make sure it fits the goals and setting of the study. An index of 0.81 was obtained by using the Cronbach alpha approach for the entire scale. Explicitly, the individual sub-scales indexes were 0.72, 0.75, 0.79, 0.73, 0.82, and 0.77 respectively.

Respondents in the two chosen schools were given five hundred (500) printed copies of the questionnaire. Out of the 500 questionnaires distributed, 394 were returned and completely filled out, representing a 78% return rate. This study was completely voluntary and ethical (ethics approval detail: FUOYE/FED/GCE/066/07/17/2024). The three-month data collection period ran from November 2024 to January 2025. The data analysis for this study was done using the Hayes macro process in SPSS version 26.0 due to its specialised approach of dealing with continuous, ordinal, and categorical data in establishing moderation effects (Sadownik, 2023). Descriptive statistics were used to summarise the respondents' demographic data and diagnostic tests, while inferential statistics (Hayes macro process V4.0, Model 2) was used to answer hypotheses 1 to 3 at 0.05 significance level.

RESULTS

This section presents the result of the study

Table 1: Demographic data

Variable	Frequency	Percentage (%)
Gender		
Male	206	52.3
Female	188	47.7
Total	394	100
Age		
8-9	265	67.3
10-11	129	32.7
Total	394	100
Class		
Pry 4	126	32.0
Pry 5	196	49.7
Pry 6	72	18.3
Total	394	100
Religion		
Christian	293	74.4
Islam	101	25.6
Total	394	100

Table 1 presents the demographic distribution of the respondents in the sampled primary schools in the University of Ibadan. The Table reveals that 52.3% (n = 206) of the respondents were males, while 47.7% (n = 188) were females. This implies that most of the respondents were male. With respect to age, it was found that 67.3% (n = 265) of the

respondents were between 8-9 years while 32.7% (n = 129) were between 10-11 years. This implies that majority of respondents fall between 8-9 years. On classes level, it was found that 32.0% (n = 126) of the respondents were in primary 4, 49.7% (n = 196) were in primary 5, and 18.3% (n = 72) were in primary 6. This implies that most of the respondents were in primary 5. As regards religion, 74.4% (n = 293) of the respondents practice Christianity while 25.6% (n = 101) practice Islam.

Descriptive Statistics of Diagnostics Tests

Table 2: Diagnostics tests of the variables

Variable	Mean	SD	Skewness		Kurtosis	
			Statistic	Std. Error	Statistic	Std. Error
Age	1.33	0.470	0.738	0.123	-1.462	0.245
Gender	1.48	0.500	0.092	0.123	-2.002	0.245
Religion	1.26	0.437	1.120	0.123	-0.749	0.245
Learners Care	187.0	30.111	-0.073	0.123	-1.402	0.245

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N=394; Durbin-Watson value for age and learners care=1.572

The descriptive statistics and diagnostic test results for the study variables are presented in Table 2. The skewness and kurtosis values for the variables were within the recommended ranges of -2 to +2 and -7 to +7, respectively, indicating no evidence of substantial departures from normality (Osiesi et al., 2025; Rosa & Tudge, 2013; Devi et al., 2023; Hayes, 2023; Charki et al., 2022; Okocha et al., 2025). Furthermore, the Durbin-Watson statistic of 1.572 indicated that the residuals were independent, suggesting that autocorrelation was not a concern because the value fell within the acceptable range of 1.5 to 2.5 (Turner & Houle, 2019; Hair et al., 1995; Aiken & West, 1991). These results indicate that the data satisfied the assumptions of normality and independence of residuals required for the regression analysis.

Table 3: Model summary

R	R ²	MSE	F	df1	df2	p	Dec.
.13	.02	906.32	1.38	5	388	.230	NS

Note: NS = Not significant

The result in Table 3 shows that the overall regression model was not statistically significant, $R = .13$, $R^2 = .02$, $F(5, 388) = 1.38$, $p = .230$. This indicates that the predictors included in the model jointly explained approximately 2% of the variance in learners' care, suggesting that the model did not provide a statistically significant prediction of learners' care.

Hypothesis One

H₁: Age will not significantly impact learners' care in primary schools

Table 4: Results from Hayes PROCESS MACRO predicting learners' care from age, and the moderating impact of gender and religion

Predictor	B	SE	t	p	LLCI	ULCI	Dec.
Constant	187.52	1.53	122.58	<0.001	184.52	190.53	
Age	-1.48	1.72	-0.86	0.39	-4.85	1.89	NS
Gender	-3.26	3.05	-1.07	0.29	-9.26	2.74	NS
Religion	-0.71	3.52	-0.20	0.84	-7.64	6.21	NS
Age × Gender	2.70	3.47	0.78	0.44	-4.12	9.51	NS
Age × Religion	7.40	3.96	1.87	0.06	-0.38	15.18	NS

Table 5: Test of interaction effect

Interaction term	ΔR^2	F	df1	df2	p	Dec.
Age × Gender	.000	0.61	1	388	.440	NS
Age × Religion	.010	3.50	1	388	.060	NS

Table 4 presents the results of the multiple regression analysis examining the impact of age on learners' care. The findings revealed that age did not significantly predict learners' care among primary school learners, [$B = -1.48$, $SE = 1.72$, $t(388) = -0.86$, $p = .390$, $CI (-4.85, 1.89)$]. The 95% confidence interval included zero, further indicating that the impact of age on learners' care was not statistically significant. The negative regression coefficient means that, on average, an increase in age was associated with a slight decrease of approximately 1.48 units in learners' care scores. However, this decrease was not statistically significant and may have occurred by chance. Consequently, there was insufficient evidence to conclude that age had a meaningful impact on learners' care in primary schools. Also, the p-value of .390 was greater than 0.05 level of significance. Based on these results, the null hypothesis, which stated that age will not significantly impact learners' care in primary schools, is not rejected. This implies that learners' care did not differ significantly across the age groups represented in the study. Therefore, age was not a significant predictor of learners' care among the sampled primary school learners.

H₂: Gender will not significantly moderate the relationship between age and learners' care in primary schools.

The result in Table 4 presents the moderation analysis examining whether gender significantly moderated the relationship between age and learners' care among primary school learners. The interaction term between age and gender was not statistically significant, [$B = 2.70$, $SE = 3.47$, $t(388) = 0.78$, $p = .440$, $CI (-4.12, 9.51)$]. The 95% confidence interval (CI) included zero, indicating that the interaction effect was not statistically significant. Furthermore, the test of the interaction effect showed that the inclusion of the Age $\times$ Gender interaction term did not significantly improve the explanatory power of the regression model, [$\Delta R^2 = .000$, $F(1, 388) = 0.61$, $p = .440$] (see Table 5). This indicates that the interaction between age and gender accounted for virtually no additional variance in learners' care beyond that explained by the main effects of age alone. The non-significant interaction effect suggests that the relationship between age and learners' care was consistent across male and female learners. In other words, gender did not alter or influence the extent to which age was associated with learners' care. Therefore, the effect of age on learners' care did not differ significantly between male and female learners in the study. Based on these findings, the null hypothesis, which stated that gender would not significantly moderate the relationship between age and learners' care in primary schools, was not rejected. This implies that gender does not play a significant moderating role in the relationship between age and learners' care among the sampled primary school learners.

H₃: Religion will not significantly moderate the relationship between age and learners' care in primary schools.

Table 4 equally presents the results of the moderation analysis examining whether religion moderated the relationship between age and learners' care among primary school learners. The interaction term between age and religion was not statistically significant, [$B = 7.40$, $SE = 3.96$, $t(388) = 1.87$, $p = .060$, $CI (-0.38, 15.18)$]. The 95% confidence interval also included zero, indicating that the interaction effect was not statistically significant at the .05 level. Furthermore, the test of the interaction effect in Table 5 showed that the inclusion of the Age $\times$ Religion interaction term did not significantly improve the explanatory power of the regression model, [$\Delta R^2 = .010$, $F(1, 388) = 3.50$, $p = .060$]. This indicates that the interaction between age and religion explained only an additional 1% of the variance in learners' care. Although this represented a small increase in the explained variance, the improvement was not statistically significant ($p > 0.05$). The positive regression coefficient for the interaction term suggests that the relationship between age and learners' care tended to vary across religious groups. However, because the interaction effect was not statistically significant, there was insufficient evidence to conclude that religion meaningfully altered the relationship between age and learners' care. In other words, the influence of age on learners' care was generally similar regardless of the learners' religious affiliation. Based on these findings, the null hypothesis, which stated that religion would not significantly moderate the relationship between age and learners' care in primary schools, was not rejected. This implies that religion does not play a significant moderating role in the relationship between age and learners' care among the sampled primary school learners.

Discussion

This study has examined the moderating impact of gender and religion on the relationship between age and learners' perceived care in selected primary schools in Oyo State, Nigeria. Findings of the study indicate that gender does not impact learners' care among primary school pupils. Despite a recent study showing a favourable correlation between teachers' gender and parents' perceptions of their wards' care (Zhang et al., 2025), the current study did not show a consonance which is likely because the sample is made up of young learners. The sampled learners' views of care in the schools may have been impacted by additional learner-centred factors. The finding of the study also contradicts the findings of previous research, which show that gender has a major impact on learners' perceptions (Adegboro & Ajayi, 2020; Setiyawan et al., 2022). However, variations in the sample and context characteristics may be the cause of this contrast in the results. Similarly, the study's findings show that religion has no discernible impact on how primary school learners evaluate the perceived care they receive from their teachers.

A finding of this study has also shown that religion does not impact learners' care among primary school learners. Religious differences by themselves do not significantly impact the quality of care or the relationships between learners and teachers as long as teachers maintain a positive attitude and show respect for their pupil's views (Nelson & Yang, 2022). Therefore, religion has neither a consistent nor a significant influence on learners' perceptions of care as experienced in schools (Primandini & Sunarso, 2025; Kriel & Livingston, 2019). This result is consistent with that of prior study that found no significant relationship between religion and psychological health (Mannion et al., 2024). However, the results are in contrast to those of past research, which demonstrated how religion affects people's opinions (Adegboro & Ajayi, 2020; Setiyawan et al., 2022; Charles, 2020). Unlike the study's sample of young learners, these previous studies sampled adults. A finding of the study also indicates that learner's age does not impact learners' perceived care at the primary school. Although a learner's perceived level of care is not directly influenced by their age (because they may not fully understand what care, particularly in a school setting, should entail at this point in their lives), age can have an impact on how educators view and address a learner's needs. Teachers' interactions and support for learners can be influenced by age-correlated factors such as the child's developmental stage, social-emotional maturity, and academic preparation (Kaedabi-Donkor et al., 2025; Shah & Gustafsson, 2020).

The findings of this study indicate that there is no substantial variation in learners' perceived care due to the interaction or moderating influence of gender and religion. A result of this kind becomes tenable because these students are immature due to their ages, psychology, and emotional status. While age and gender may have an impact on some aspects of classroom behaviour and motivation, several earlier research show that these factors alone frequently do not account for differences in learners' academic engagement or level of caring (Primandini & Sunarso, 2025; Kriel & Livingston, 2019; Kaedabi-Donkor et al., 2025; Shah & Gustafsson, 2020). This contradicts the findings of a past study which found a significant moderating effect of learners' age on the interaction on sense of coherence and subjective well-being (Agormedah et al., 2024). This contradiction could be due to the fact that sample of this current study were young primary school learners and the target research variable being perceived care. While age, gender,

and religion all independently correlate with various behavioural and motivational characteristics, their interactions do not substantially explain the variation in primary school learners' engagement or level of care. These discrepancies are probably better explained by other contextual and personal factors.

Conclusion

The school should be a place where learners feel supported. Learners are more likely to achieve better academic results when they feel comfortable and supported in the classroom and school space. This study has examined the moderating impact of gender and religion on the relationship between age and learners' perceived care in selected primary schools in Oyo State, Nigeria. This study has found that learner's gender, age and religiosity do not impact their perceived care within classroom and school contexts. Also, there is no substantial variation in learners' perceived care due to the interaction or moderating influence of age and gender, as well as age and religion.

Recommendations

Based on these findings, it is recommended that education policymakers and schools should emphasize that care should be based on individual learner needs rather than demographic characteristics; teachers should be encouraged to prioritise individualised attention and responsiveness to each learner's unique needs, interests, and challenges rather than relying on assumptions based on gender or religion; schools, especially primary schools, should continue to uphold policies that promote equal care for all learners regardless of gender or religion, making sure that these policies are clearly communicated and consistently implemented; training programmes for teachers should be created that prioritise cultural competencies, empathy, and active listening without placing an undue emphasis on group identities; parents and community stakeholders should be reassured that all learners receive fair treatment in the school setting; it is necessary to create professional development that emphasises universal care principles like equity, respect, and emotional support rather than demographic classifications; and teachers should be encouraged to acquire the skills necessary to create classroom environments that are safe and supportive for all learners.

Limitations and Future Research Directions

This study has some limitations. The convenience sampling of two schools in the LGA, out of the many schools therein may have affected the generalizability of the results of the study. In light of this study's findings, we suggest that more research be done to examine additional variables, such as other socioeconomic variable, cultural and school related factors, or teachers and learner's psychological variables. Furthermore, longitudinal research is required to track whether the impact of gender and religion is negligible across time and in various regional contexts.

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