

Original Research Article

Psychological Sense of School Membership and Gender as Predictors of the Internalizing Symptoms of In-School Adolescents in Ibadan, Oyo State, Nigeria

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Abstract: Internalizing symptoms are becoming increasingly prevalent among adolescent within school settings as a result of social and academic pressures. These result in psychopathology and maladjustments such as anxiety, depression and other psychosomatic conditions. Concerned with the above, this study, investigated psychological sense of school membership and gender as predictors of internalizing symptoms among in-school adolescents in Ibadan. Using a cross-sectional research design, multistage sampling technique was used to select 513 students from public and private secondary schools in Ibadan. Data was collected through the use of structured questionnaires. Findings showed that adolescents' gender and psychological sense of school membership showed a joint predictive influence on internalizing symptoms ($R = .525$, $R^2 = .276$, $F = 97.12$, $P < 0.01$). There was an independent influence of gender on internalizing symptoms ($t(511) = 8.069$, $P < 0.01$). Adolescents' psychological sense of school membership also had a significant independent influence on internalizing symptoms ($t(511) = 8.867$, $P < 0.01$). This study revealed that psychological sense of school membership of adolescents and gender are essential in addressing internalizing symptoms amongst adolescents. Therefore, female adolescent students should be trained on emotional resilience early, psycho-educative training should be offered to teachers and other adults in the school environment and schools should intentionally create a climate that supports high psychological sense of school membership of adolescents. Psychoeducation and the implementation of interventions to prevent and address internalizing symptoms should be a part of the strategies to improve adolescents' well-being.

Keywords: Psychological Sense of School Membership, Gender, Adolescents, Internalizing Symptoms, Psychoeducation, Mood Disorders.

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INTRODUCTION

One of the ways that the spectrum of symptoms associated with childhood and adolescent mental health issues have been dichotomized, is into internalizing symptoms and externalizing symptoms (Meque *et al.*, 2019).

Internalizing symptoms, which are generally experienced inwardly by individuals and include psychopathologies and maladjustments such as depression, anxiety and some somatic complaints, are becoming increasingly prevalent among adolescents, especially in those within school settings where a variety of social and academic pressures are faced (Wangila and Oseko, 2023).

According to the World Health Organisation, 50% of all mental health issues commence before the age of fourteen (Kessler *et al.*, 2006). Furthermore, the world health organisation's global accelerated program for the health of adolescents and the global strategy for women's, children's and adolescents' health strategic plan for 2016-2030 have both recommended the implementation of interventions to prevent and address internalizing symptoms as a proven strategy to achieve measurable impact regarding adolescents' well-being (WHO, 2023; United Nations, 2015). Children and adolescents with internalizing symptoms frequently keep their maladaptive emotions and thought processes to themselves (Gross and Cassidy, 2019). These symptoms become especially worrisome since they often go

unnoticed due to their subtle, inwardly directed nature, making adolescents vulnerable to prolonged periods of emotional distress. Furthermore, family members of adolescents might not pay prompt attention to internalizing symptoms in such individuals because it does not affect other members of the family as externalizing symptoms such as aggression and delinquent behaviour would.

Adolescence is a time of considerable physical, cognitive and emotional changes, making teenagers more susceptible to the development of internalizing disorders (Mastorci *et al.*, 2024; Rapee *et al.*, 2019). Furthermore, researchers have acknowledged the fact that adolescence is a critical phase of an individual's life course for internalizing symptoms, as it is the commencement of the transition from childhood into adulthood (Keyes and Platt, 2024; Kwan *et al.*, 2021).

Psychological sense of school membership has been used interchangeably with perceived school belonging. It describes the quality of the relational dimensions of educational contexts and concerns whether students have feelings of being appreciated, respected, being a part of and happy at school (Goodenow, 1992). The key social environments, such as schools, where adolescents spend most of their time have been found to be crucial. Studies that examined the significance of the quality of adolescents' social environments, based on an ecological perspective, have reported that the extent to which the microsystem of adolescents props and cushions them, has an influence on their mental health (Sarmiento *et al.*, 2020; Huang *et al.*, 2023). Empirical studies outside Nigeria showed that adolescents with a strong notion of school belonging have reduced levels of internalizing symptoms, implying that a pleasant and inclusive school climate helps guard against mental health issues (Franco *et al.*, 2022; Wang *et al.*, 2020). Students who feel valued, appreciated and supported by their peers, teachers and other adults in the school are more likely to develop positive self-perceptions, which can serve as a protective factor against the development of anxiety and depressive symptoms.

Gender, operationalized in this study as male or female, serves as both a sociocultural and biological variable in terms of its correlations with adolescents' mental health. Besides, the continuous existence of gender differences between men and women in diverse domains continues to perpetuate several explanations from scholars. Some studies have found that adolescent girls are more likely to experience internalizing symptoms than boys, due to differences in societal expectations and gender specific coping skills (Keyes and Platt, 2024; Salk *et al.*, 2017). Furthermore, correlations between gender related coping skills and internalizing symptoms have been documented in literature. For instance, Ziergert and Kister (2002) suggest that a ruminative response style to a low mood

or distressing situation prolongs, intensifies and increases the likelihood of recurrence of depressive mood among girls. Girls and women are more likely to ruminate in response to a distressing situation, which implies focusing attention on the causes and consequences of the distress, rather than solutions, while males are more likely to distract themselves or engage in problem solving. Biological factors have also been found to underlie girls' higher predisposition to internalizing symptoms. Chong (2005) claimed that the hormonal make-up of women makes them have a higher tendency to be cognitively passive in comparison to men. In relation to that, Werneck *et al.* (2023) reported that being cognitively inert is correlated with depressive symptoms.

Significant deficits in variables crucial to everyday functioning, such as self-esteem, social engagement, academic achievement and ability to establish meaningful relationships with peers might arise from internalizing symptoms (Ghandour *et al.*, 2019; Huber *et al.*, 2019; Siennick and Picon, 2020), these could in turn dovetail into other cycles of mental health issues, such as suicidal ideation and substance abuse. Clearly, the impact of internalizing disorders on adolescents' well-being is significant, and is worthy of attention. In Nigeria, studies have shown that the prevalence of depressive and anxiety disorders among in-school adolescents is significant (Mbanuzuru *et al.*, 2021; DadeMathews *et al.*, 2024). However, correlates of internalizing symptoms among adolescents enrolled in schools, especially in Ibadan metropolis in south west Nigeria, have not been carefully investigated (Fatiregun and Kumapayi, 2014; Jörens-Presentati *et al.*, 2021).

Despite the school being one of the most pivotal social environments of adolescents, few studies in Nigeria have appraised how school-level psychological constructs, especially psychological sense of school membership, may be predictors of internalizing symptoms for this group. Given the Ibadan's distinct social and economic environment, and being in a region that has the highest prevalence of substance use among the six geo-political zones of Nigeria (UNODC, 2018), it is essential to understand the specific factors that lead to the emergence and expression of internalizing symptoms in the adolescents in this city.

Furthermore, most research and studies correlating gender to internalizing symptoms in Nigeria have positioned gender either as a moderating or mediating variable (Olabisi *et al.*, 2023; Ciu *et al.*, 2022). This context may reduce the extent to which the research findings can reveal gender influence, and its implications for preventive and intervention programs. Understanding how both factors interact to influence internalizing symptoms is crucial in shaping effective mental health interventions for adolescents. Three hypotheses were tested in this study.

In-school adolescents who score low on psychological sense of school membership will report higher internalizing symptoms; female adolescents will report more internalizing symptoms than male adolescents; and there will be significant independent and joint influence of gender and psychological sense of school membership on the internalizing symptoms of in-school adolescents.

METHOD

Research Design and Sampling

The research was a survey and approach to data collection was the use of questionnaires. Independent variables in this study were adolescents' psychological sense of school membership (high/low) and gender (male/female). The dependent variable was internalizing symptoms (high internalizing symptoms/low internalizing symptoms).

Sampling Method

Multistage sampling technique was adopted. The first stage involved convenience sampling of four local government areas in Ibadan metropolis.

Table 1: Estimated Population of Adolescents in schools across the selected Local Governments Areas of Oyo State

Age Range	12-14		15-18		
Local Governments	Male	Female	Male	Female	Total
Ibadan North	14,459	14,257	18910	19741	67367
Ibadan South West	13,143	12,288	16591	12429	54451
Ibadan North West	7,040	7,299	9569	9710	33618
Ibadan North East	15,078	14,952	17851	19413	67294
TOTAL					222730

Source: Oyo State Bureau of Statistics, (2018, p.35).

The second stage was the selection of six schools from these local government areas through simple random sampling.

Participants were then purposively selected from senior secondary classes in order to ensure that respondents have attained the age of adolescence and have adequate comprehension of the items on questionnaires. The last stage was systematic random sampling to select adolescent students on every third seat across senior secondary classes in the selected schools, to further ensure a representative sample and avoid bias. 516 school-attending adolescents were validated for the study.

Procedure

Ethical procedures were followed to integrate participants to the study through their respective school administrators' consent, parental consent, and participant informed consent. Students in both the private and public schools were administered questionnaires by the principal investigator with the support of a trained research assistant. Data were collected twice a week for 3 months. This period aligns with the already established academic period for both public and private schools within the state. 516 questionnaires were administered across the selected schools in the local government areas, 513 were classified as valid for the analysis while 3 were not.

Measures

Psychological sense of school membership was measured using the psychological sense of school membership scale. It is an 18-item scale, which was

developed by Goodenow in 1993 (Goodenow, 1992). The scale was developed for use specifically with adolescent students as a measure of their subjective sense of school membership. Each item is answered based on a 5-point Likert rating scale, ranging from Not at all true =1, Somewhat false=2, Slightly true =3, Largely true=4, Completely true=5. Items 3, 6,9,12, and 16 are reverse scored.

The authors reported a satisfactory internal consistency with Cronbach's alpha coefficient ranging from .77 to .88 for different samples (Goodenow, 1992). Cronbach's value for the psychological sense of school membership scale was found to be 0.83 for this study.

Participants who scored above the mean were considered as having a high psychological sense of school membership while participants who scored below the mean were considered as having a low psychological sense of school membership.

Internalizing symptoms was measured using the internalizing symptoms scale of the strengths and difficulties questionnaire (SDQ)-the self report version. The scale was developed by Robert N. Goodman in 2001(Goodman, 2010). The internalizing symptoms scale comprises a total of 10 items, on a 3-point Likert-type scale, with the total score calculated by adding individual scores. Items 7 and 8 are reverse scored, while in scoring items 1,2,3,4,5,6,9,10, Not true=1, Somewhat true=2 and Certainly true=3.

The reliability coefficient of the internalizing symptoms scale has been reported to be 0.73, indicating

a good internal consistency (Durbiej *et al.*, 2019). The Cronbach Alpha for this study was found to be 0.67.

Table 2: Socio-demographic Characteristics

Characteristics	Categories	Frequency	Percentage
Gender	Male	217	42.30
	Female	296	57.70
Current class level	Senior Class 1	70	13.60
	Senior Class 2	170	33.10
	Senior Class 3	273	53.20
School Type	Public Schools	247	48.30
	Private Schools	264	51.70
Religion	Islam	112	21.80
	Christianity	395	77.00
	Traditional Religion	3	0.6
	Others	3	0.6
Age Age range= 12-17 years Mean age =14.23			

Source: Outputs from SPSS (2023)

As depicted in Table 2, majority of the adolescents were females; 296 (57.70%). This indicates the dominance of female students across the selected schools in Ibadan metropolis. Majority of the students are in senior secondary class three; 273 (53.20%).

Private school students were slightly higher in number than respondents from public schools;

264(51.70%). Christian respondents were the highest in number, being 395 (77.00%).

RESULTS

Hypothesis 1 stated that In-school adolescents who score low on psychological sense of school membership will report higher internalizing symptoms. This hypothesis was analysed using the Independent Samples T-Test. The results are presented in Table 3.

Table 3: Summary of Independent Samples T- Test showing differences between low and high psychological sense of school membership on internalizing symptoms among in-school adolescents

PSSM	N	Mean	SD	T	Df	p
High	369	6.31	3.42			
				8.87	511	< .01
Low	144	9.45	4.06			

Dependent Variable: Internalizing symptoms. Source spss 2023

As depicted in Table 3, there is a significant difference between low psychological sense of school membership (mean = 9.45; SD = 4.06) and high psychological sense of school membership (mean = 6.31; SD = 3.42) on internalizing symptoms among in-school adolescents ($t(511) = 8.87, p < .01$). This indicates that in-school adolescents who experienced low psychological sense of school membership scored higher

on internalizing symptoms than their counterparts who experienced high psychological sense of school membership. Hypothesis one is therefore accepted.

Hypothesis 2 stated that female adolescents will report more internalizing symptoms than male adolescents. This hypothesis was also analysed using the independent samples T-Test.

Table 4: Summary of Independent Samples T- Test showing differences between male and female on internalizing symptoms

Gender	N	Mean	SD	T	Df	p
Female	296	8.30	3.76			
				8.07	511	< .01
Male	217	5.67	3.50			

Dependent Variable: Internalizing symptoms. Source: SPSS 2023

The results in Table 4 indicate that there was a significant difference between female adolescents (mean = 8.30) and male adolescents (mean = 5.67) on

internalizing symptoms ($t(511) = 8.069, p < .01$). This indicates that female adolescents reported more

internalizing symptoms than their male counterparts. Hypothesis two is therefore accepted.

Table 5: Gender frequency based on high internalizing symptoms. Showing the number of participants reporting high internalizing symptoms and percentages by gender

Valid	Frequency	Percentage	Valid Percentage	Cummulative Percent
Female	163	75.5	75.5	75.5
Male	53	24.5	24.5	100.0
Total	216	100.0	100.0	

Source: Extracted from the results in SPSS (2023)

The results from table 6 indicate that, a total of 216 participants reported high internalizing symptoms. Out of the participants that reported high internalizing symptoms, 75.5% were females, while 24.5% were males.

Hypothesis 3 stated that there will be significant independent and joint influence of adolescent’s gender and adolescents’ psychological sense of school membership on internalizing symptoms among in-school adolescents. This hypothesis was analysed using multiple regression analysis as shown in Table 4.3 below:

Table 6: Summary Table of multiple regression table showing the joint influence of gender and psychological sense of school membership on internalizing symptoms among in-school adolescents

Model	β	T	p	R	R ²	F	p
Gender	-.303	-8.025	< .01	.525	.276	97.129	< .01
Psychological sense	-.405	-10.709	< .01				

The results from the table indicate that, there is significant influence of gender and psychological sense of school membership on internalizing symptoms among in-school adolescents, $R^2 = .276$, $F(2,510) = 97.129$, $p < .01$. The result also indicates that gender and psychological sense of school membership accounted for 27.6% variance in internalizing symptoms among in-school adolescents. Also, gender ($\beta = -.303$, $p < .01$) and psychological sense of school membership ($\beta = -.405$, $p < .01$) independently influenced internalizing symptoms among in-school adolescents. This means that female in-school adolescents exhibit high internalizing symptoms and also the in-school adolescents who have low psychological sense of school membership exhibited higher internalizing symptoms. Therefore, hypothesis three is accepted

vulnerability factors combine with stress to result in internalizing symptoms. Indeed, most adolescents encounter stressful situations in one form or the other. This is confirmed by results from an investigation on adolescent stress, which revealed that 74% of the adolescents sampled were experiencing some degree of stress at the time of the study (Anjum *et al.*, 2022).

Findings also showed that about 30% of participants had a low sense of school belonging. Moreover, most of those with low psychological sense of school membership also had significant internalizing symptoms.

This does not only confirm, but also expands previous studies that showed the crucial role of adolescents’ critical social environments on their mental health (Orben *et al.*, 2020; Huang *et al.*, 2023; Franco *et al.*, 2022). This finding is thus consistent with previous findings that supportive school environments address adolescents’ yearning for relatedness, improving their emotional well-being and lowering their chances of internalizing symptoms (Wang *et al.*, 2020; Perkins *et al.*, 2021; Preston & Rew, 2022; Manning *et al.*, 2023).

Nevertheless, there are variances in findings conducted in different African countries regarding which of the groups in an adolescent’s social network has the highest influence on internalizing symptoms.

Although the findings in this study support a significant influence of sense of school belonging on internalizing symptoms, some studies conducted in other parts of Africa such as South Africa and Kenya, identified that sense of family and neighbourhood

DISCUSSION

This study set out to assess the influence of psychological sense of school membership and gender on the internalizing symptoms of in-school adolescents in Ibadan metropolis, Nigeria. Findings showed that over 40% of in-school adolescents in the study reported high internalizing symptoms. One possible explanation of this is the diathesis-stress model of depression, which suggests that when existing vulnerability factors combine with present stress, there is a high likelihood for depression to ensue. In adolescents, having unfavourable encounters such as being rebuffed by classmates, and other interpersonal difficulties often result in ongoing heightened social vigilance and reassurance-seeking, which become vulnerability factors for depression. Consequently, whenever stressful situations arise, which are inevitable from time to time, the existing

belonging, as well as sense of kinship with friends, who may be in or out of school friends, have the highest protective impact against anxiety and depressive symptoms (Venturo-conerly *et al.*, 2019; Cheng *et al.*, 2014).

These disparities suggest that interventions need to be adapted to focus on the most influential adolescents' social environments, based on the peculiar socio-cultural dynamics in each country or community. Better still, a comprehensive approach that covers all of adolescents' key social environments may be most beneficial.

The findings from participants that showed low psychological sense of school membership indicate their perception of their teachers as showing lack of respect and empathy for them as adolescent students. This is particularly worrisome given the inclusion of adolescents' developmental psychology in most teacher-training curricula. It is believed in most African communities that certain behaviours such as verbal abuse and corporal punishment of children and youths are indispensable to effectively raise a well-behaved child (Kusemererwa and Bukenya, 2024). Additionally, in most African cultures, respect is expected to be unidirectional. The younger person is expected to show respect for the older person, while the older ones are not obliged to show any form of respect for the younger individual.

A possible explanation for teachers' lack of empathy and respect for adolescent students as reported by most of the respondents with low sense of school belonging could be that some teachers find it difficult to change their existing afrocentric belief system about adults' relational approach to younger ones.

This is demonstrative of confirmation bias, a cognitive prejudice which veers individuals' towards sticking to behaviours or messages that align with their existing beliefs. Also, it points at the necessity for continuous psychoeducation of teachers.

The findings for gender influence on internalizing symptoms indicate that out of all the participants that reported high internalizing symptoms, over 70% were females. These findings align with existing literature that confirm that females often exhibit higher levels of internalizing symptoms, such as despair and anxiety, compared to their male peers (Hoyt *et al.*, 2023; Salk *et al.*, 2017). This evidently higher prevalence of internalizing symptoms among girls is indeed a matter of great concern, because as adolescent girls grow to become women, the prevalence of depression among them even rises further (Patten *et al.*, 2006). The trajectory of depression among females as they grow from adolescence to adulthood could be influenced by sexism, a notion that one sex is worthier than another. This concept is typically unfavourable towards women

as they are often considered the less worthy sex (Akingbade and Udegbe, 2022). Higher prevalence of depression among females as they grow from adolescence to other developmental stages can also be alluded to widening socio-economic inequalities which is usually ill-disposed towards women. The findings highlight the need for additional gender driven interventions aimed at building emotional resilience early in female adolescents. Nevertheless, Salavera *et al.* (2019) had a disparate finding from their study, which showed more males reporting internalizing symptoms than females.

The findings that there is joint predictive influence of gender and psychological sense of school membership on internalizing symptoms among participants lines up with previous studies, which noted that internalizing symptoms among adolescents is rarely caused by a singular factor. Typically, combinations of variables are contributors. For instance, Doering *et al.* (2022) explained that internalizing symptoms in adolescents are influenced by childhood related traumatic experiences as well as neurodevelopmental issues. Besides, the joint predictive influence of sense of school connectedness and gender accords with the biopsychosocial model of psychopathology which explains that interactions between biological, psychological and social factors are what determine the development of mental health disorders in individuals.

There are some limitations to this present study as it utilized only quantitative methods of data collection. In-depth responses that aid a more thorough exploration of other complex, non-overt issues that impact adolescents' psychological sense of school membership and internalizing symptoms would have been obtainable with the adoption of mixed methods research. Nonetheless, as far as we know, psychological sense of school membership is a novel variable to be explored among in-school adolescents in Ibadan metropolis. Hence this study has established empirically that psychological sense of school membership and internalizing symptoms among adolescents is a pertinent construct to study in Nigeria, and it opens up opportunities for future research.

Future studies, using mixed methods research, may add broader perspectives by interviewing adolescents about their unique experiences in addition to the use of structured data collection. Future studies might also aspire to collect additional data from significant adults in adolescents' lives such as parents and teachers in order to expand the understanding of interactions between psychological sense of school membership, gender and internalizing symptoms among school-attending adolescents.

CONCLUSION

Given the prevalence of internalizing symptoms among adolescents and the fact that about 60% of people

who committed suicide previously had a mood disorder such as major depression, attention to internalizing symptoms is evidently called for (Erkki, 2020). The prevention of, and addressing internalizing symptoms in adolescents should be adopted as one of the prioritized strategies towards suicide prevention, suicide being a crucial public health problem in Nigeria, and globally.

In addition, interventions that enhance psychological sense of school membership should also be considered as one of the crucial components of a comprehensive approach to the prevention of mental health disorders in school-attending adolescents. One of the features of such comprehensive interventions could be the psychoeducation of teachers and other adults in the school environment on applicable and helpful psychological constructs.

The significant percentage of participants reporting internalizing symptoms in this study suggests that despite advocacy alerts that the implementation of interventions to prevent and address internalizing symptoms should be a part of the strategies to improve adolescents' well-being (world health organization's global accelerated action for the health of adolescents: AA-HA!, the global strategy for women's, children's and adolescent health: 2016-2030), there are still significant gaps.

Consequently, novel approaches towards preventing internalizing symptoms in adolescents should be explored, and current efforts intensified. Fostering protective factors within the important social environments of adolescents such as schools should be one of the focus areas. This will be important in averting emotional difficulties and maladjustments in adolescents which could dovetail into more serious psychopathologies in adult life.

DECLARATION

Conflict of Interest: The authors declare no conflicts of interest.

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Data Availability Statement:

The data that support the findings of this study are available from the corresponding author, (Kemi A. Nweke, adekemmynweke@yahoo.com), upon reasonable request.

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