

Patterns and Preventive Strategies for Health Risk Behaviours Among in-School Adolescents in Ado Ekiti, Ekiti State, Nigeria

Oladiran Isdaiah Olagunju^{1*}, Olowa Jesutofunmi Elizabeth², OjoAbel Adeniji³, Alangs Manasseh Stephen⁴, Adeniran Bukunmi Felicia⁵

^{1,2,4,5}School of Community Health, Obafemi Awolowo University Teaching Hospitals Complex (OAUTHC), Ile-Ife, Osun State, Nigeria

³Department of Community Health, College of Community Health Sciences, Wesley University, Ondo State.

***Corresponding Author**

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ABSTRACT

Background: Health risk behaviours acquired during adolescence are a leading driver of preventable morbidity and mortality among young people worldwide, yet context-specific evidence to guide school-based prevention remains scarce in many Nigerian settings, including Ado Ekiti, Ekiti State. This study examined the prevalence and patterns of health risk behaviours, awareness of and attitudes toward preventive strategies, associated factors, and the perceived effectiveness of existing interventions among in-school adolescents in Ado Ekiti.

Methods: A descriptive cross-sectional survey was conducted among 248 in-school adolescents aged 10-19 years, selected from public and private secondary schools in Ado Ekiti through multi-stage sampling combining purposive school selection with systematic random selection of students. Data were collected using a structured, self-administered questionnaire and analysed with SPSS version 27 using descriptive statistics, chi-square tests, Pearson correlation, and independent-samples t-tests, with significance set at $p < 0.05$.

Results: Nearly half of respondents (49.2%) had engaged in at least one health risk behaviour, most commonly unhealthy dietary practices (55.6%) and physical inactivity (46.8%), and 29.8% reported two or more concurrent behaviours. Only 25.8% demonstrated adequate awareness of preventive strategies, although 64.5% held positive attitudes toward prevention. Health risk behaviours were significantly associated with age, gender, school type, and socioeconomic status ($p < 0.05$). They were significantly and inversely correlated with awareness ($r = -0.412$), attitude ($r = -0.387$), and perceived effectiveness of existing strategies ($r = -0.356$), all $p < 0.001$.

Conclusion: Health risk behaviours cluster at high prevalence among in-school adolescents in Ado Ekiti and are shaped by an interconnected set of individual, interpersonal, and contextual determinants that existing school-based interventions have not adequately addressed. Comprehensive, skills-based, peer-led, and family-inclusive prevention strategies are urgently required.

Keywords: adolescents; health risk behaviours; preventive strategies; school health; Nigeria

INTRODUCTION

Adolescence, defined by the World Health Organisation as the period between ages 10 and 19 years, is a developmental stage of rapid physical, psychological, and social transition during which health-related habits are formed that persist and often compound across the life course (Sawyer et al., 2020). Health risk behaviours acquired during this period, spanning substance use, risky sexual activity, physical inactivity, unhealthy dietary

practice, violence, and cyberbullying, collectively account for a disproportionate share of the global adolescent disease burden, contributing to an estimated 1.19 million adolescent deaths in 2019 through road traffic injury, suicide, interpersonal violence, and HIV/AIDS, causes that are substantially preventable (WHO, 2021). Sub-Saharan Africa, home to a rapidly expanding adolescent population projected to exceed 300 million by 2030, carries a growing share of this burden, with systematic reviews documenting early sexual debut, multiple partnerships, unprotected intercourse, and rising substance use across the region (Kabiru et al., 2025; Ssewanyana et al., 2020).

Nigeria, with approximately 40 million adolescents constituting a fifth of its population, exemplifies these patterns at national scale. Recent syntheses estimate that behavioural disorders affect 15.1% of Nigerian adolescents and emotional disorders 11.4%, translating to several million young people whose mental health needs go largely unmet (MedRxiv, 2025), while a comparable school-based study in neighbouring Ijesa-Land, Osun State, found that 48.6% of in-school adolescents had engaged in at least one health risk behaviour, including sexual intercourse (22.9%), alcohol use (19.7%), and illicit drug use (9.4%), with risk behaviours clustering significantly within individuals (Omisore et al., 2024; Naing et al., 2022).

Despite the scale of this problem nationally, and despite Ekiti State's substantial investment in education infrastructure and comparatively high school enrolment, Ado Ekiti, the state capital, has no published, context-specific data describing the prevalence, patterns, or determinants of health risk behaviours among its in-school adolescent population, nor rigorous evidence on whether the health education programmes, counselling services, and community campaigns that nominally exist in its schools are known to, valued by, or effective for the adolescents they are intended to serve. Consequently, policymakers, school administrators, and health providers in Ekiti State are currently designing and resourcing adolescent health interventions without a local evidence base, relying instead on data extrapolated from other states and national averages that may not accurately reflect the specific behavioural patterns, awareness gaps, and structural determinants operating in Ado Ekiti's schools (Dorcas et al., 2024; Omisore et al., 2024).

Beyond this immediate evidence gap, the study is justified on scientific, policy, and practical grounds. Scientifically, it extends the still-limited empirical literature on adolescent health risk behaviour in sub-Saharan Africa to a state capital that has not previously been studied, complementing rather than duplicating the Ijesa-Land findings of Omisore et al. (2024) and testing the applicability of established behavioural frameworks, the Health Belief Model, Social Cognitive Theory, and the Theory of Planned Behaviour, in a new Nigerian setting. At the policy level, the study speaks directly to Nigeria's National Adolescent Health Policy and to Sustainable Development Goal 3, both of which call for coordinated, evidence-based, multi-sectoral action on adolescent health (United Nations, 2015; UNESCO, 2020), and offers Ekiti State's education and health authorities empirical grounds on which to redesign and resource school health programming rather than continuing to rely on generic, non-contextualised guidance. At the practical level, the findings have direct application for school administrators seeking to strengthen pastoral care and health education, for health providers aiming to improve linkages between schools and adolescent-friendly services, and for families seeking evidence on which protective strategies, such as parental supervision and communication, are most strongly associated with reduced risk-behaviour engagement in their own community context (National Bureau of Statistics, 2021). Despite the substantial and well-documented burden of interconnected health risk behaviours among Nigerian adolescents and their established contribution to preventable morbidity and mortality, there is a striking absence of rigorous, context-specific empirical data on the prevalence, patterns, awareness, attitudes, and determinants of these behaviours among in-school adolescents in Ado Ekiti, Ekiti State, a gap that leaves policymakers, educators, and health-service providers without the local evidence required to design, target, and evaluate effective school-based preventive interventions.

This study therefore examined patterns and preventive strategies for health risk behaviours among in-school adolescents in Ado Ekiti, with five specific objectives: to identify the prevalent health risk behaviours; to assess adolescents' awareness of, and attitudes toward, preventive strategies; to determine the factors associated with health risk behaviour engagement; and to examine the perceived effectiveness of existing preventive strategies. By generating rigorous, locally grounded evidence, the study aims to support the design

of evidence-based, culturally appropriate interventions in Ado Ekiti and comparable Nigerian settings, in direct support of Sustainable Development Goal 3 and Nigeria's National Adolescent Health Policy commitments (United Nations, 2015; UNESCO, 2020).

LITERATURE REVIEW

Empirical evidence across sub-Saharan Africa consistently documents high and clustering rates of adolescent health risk behaviour. In the most directly comparable Nigerian study, Omisore et al. (2024) found that 48.6% of in-school adolescents in Ijesa-Land, Osun State, had engaged in at least one health risk behaviour, with male adolescents significantly more likely than females to report multiple concurrent behaviours, and with strong statistical associations between different behaviour types, indicating a common underlying vulnerability rather than independent, unrelated risks. This clustering pattern has been replicated across the region: Ssewanyana et al. (2020), synthesising evidence from multiple sub-Saharan African countries, reported early sexual debut before age 15, inconsistent condom use, and rising alcohol and cannabis use as recurring features of adolescent risk profiles, while Kabiru et al. (2025) further identified adverse childhood experiences, low self-efficacy, and limited access to positive developmental opportunities as shared upstream determinants linking otherwise distinct risk behaviours.

At the national level, Dorcas et al. (2024) documented persistent gaps in Nigerian adolescents' access to youth-friendly sexual and reproductive health services, attributing low service uptake to provider stigma, breaches of confidentiality, and policies requiring parental consent, while the Center for Policy Impact in Health (2024) estimated that 13% of Nigerian adolescents, some 166 million young people globally and several million nationally, live with a diagnosable mental health condition without accessing appropriate care, a burden closely intertwined with substance use and risk-taking behaviour. A national meta-analysis (MedRxiv, 2025) placed the best-available prevalence of any adolescent mental health disorder in Nigeria at 15.1%, with behavioural disorders as the single largest contributor, figures broadly consistent with international low- and middle-income-country estimates of 10% to 16% (MedRxiv, 2025).

Three behavioural theories inform the conceptual basis of this study. The Health Belief Model (Rosenstock et al., 2020) posits that health-protective behaviour depends on perceived susceptibility and severity of a threat weighed against perceived benefits and barriers to action, and on the presence of internal or external cues to action, a construct directly relevant to the low awareness of preventive resources documented in comparable Nigerian school settings. Social Cognitive Theory (Bandura, 2021) emphasises observational learning and self-efficacy, explaining how adolescents model behaviour observed among peers who appear to be rewarded with social status or acceptance, and why skills-based interventions that build self-efficacy tend to outperform purely informational ones. The Theory of Planned Behaviour (Ajzen, 2020) further accounts for the well-documented attitude-behaviour gap in adolescent health research, whereby positive attitudes toward prevention do not reliably translate into protective practice because behavioural intention is also shaped by subjective norms and perceived behavioural control, both of which are heavily influenced by peer context.

Evidence on intervention effectiveness converges on a consistent conclusion: skills-based, interactive, and peer-delivered prevention models produce more sustained behavioural change than didactic, knowledge-only health education (Kabiru et al., 2025; UNESCO, 2020), yet Ssewanyana et al. (2020) caution that even theoretically sound programmes frequently fail in low-resource settings owing to weak implementation fidelity, inadequate teacher or facilitator training, and poor alignment with adolescents' actual needs and preferences, a gap between programme existence and programme effectiveness that this study directly investigates in the Ado Ekiti context.

METHODS

Study Design and Setting

This study employed a descriptive cross-sectional survey design, an approach widely used to assess the prevalence, patterns, and correlates of health behaviours within a defined population at a single point in time.

The study was conducted in Ado Ekiti, the capital of Ekiti State in southwestern Nigeria (approximately 7.6333°N, 5.2167°E), a predominantly Yoruba, Christian-majority city that serves as the state's administrative, educational, and commercial hub and hosts numerous public and private secondary schools.

Study Population and Sample Size

The study population comprised in-school adolescents aged 10-19 years enrolled in public and private secondary schools in Ado Ekiti who were present on the day of data collection and provided informed consent or assent (with parental consent additionally required for participants under 18 years).

The minimum sample size was determined using Cochran's formula, $n_0 = Z^2p(1-p)/d^2$, based on a prevalence of 21.1% drawn from a recent comparable Nigerian study, a 95% confidence level ($Z = 1.96$), and a precision of 5% ($d = 0.05$), yielding a minimum required sample of 256 students. Of 256 questionnaires administered, 248 were retrieved complete and usable, a response rate of 96.9%.

Sampling Technique

A multi-stage sampling technique was used. In Stage 1, secondary schools meeting eligibility criteria (minimum enrolment of 200 students, offering both junior and senior secondary classes, and located within Ado Ekiti metropolis) were purposively selected and stratified by school type (public/private) and gender composition. In Stage 2, classes within each selected school were randomly selected across all grade levels. In Stage 3, individual students were selected from class registers using systematic random sampling, with a sampling interval calculated by dividing class size by the desired sample per class and a randomly selected starting point.

Research Instrument and Data Analysis

Data were collected using a structured, self-administered questionnaire comprising sections on socio-demographic characteristics, prevalence and patterns of health risk behaviours (substance use, sexual behaviour, physical activity, dietary practice, violence, and cyberbullying), awareness of preventive strategies, attitudes toward prevention (5-point Likert scale), factors associated with risk behaviour, and perceived effectiveness of existing strategies.

Instrument reliability was established through test-retest administration among 30 adolescents two weeks apart, with acceptable Pearson correlation coefficients ($r \geq 0.70$). Data were analysed in SPSS version 27 using descriptive statistics (frequencies, percentages, means, and standard deviations) and inferential statistics (chi-square tests of independence, Pearson correlation, and independent-samples t-tests), with statistical significance set at $p < 0.05$.

Ethical Considerations

Ethical approval was obtained from the Ekiti State Ministry of Health and Human Services Health Research Ethics Committee (Approval Number: EKHREC/EA/U/169). Written parental or guardian consent and adolescent assent were obtained prior to participation; participation was voluntary with the right to withdraw at any stage, and confidentiality was maintained through anonymised coding, secure data storage, and aggregate reporting of findings.

RESULTS

A total of 256 questionnaires were administered, and 248 were retrieved complete and usable, giving a response rate of 96.9%.

Socio-Demographic Characteristics

Table 1 Socio-Demographic Characteristics of Respondents (N = 248)

Variable	Category	Frequency (n)	Percentage (%)
Age (years)	12-14 years	78	31.5
	15-17 years	126	50.8
	18-19 years	44	17.7
Sex	Male	128	51.6
	Female	120	48.4
Class level	JSS 1-3	74	29.8
	SSS 1	52	21.0
	SSS 2	68	27.4
	SSS 3	54	21.8
School type	Public	152	61.3
	Private	96	38.7
Religion	Christianity	184	74.2
	Islam	52	21.0
	Traditional/Other	12	4.8
Living arrangement	Both parents	142	57.3
	Single parent	64	25.8
	Guardian/relative	38	15.3
	Alone	4	1.6
Parent/guardian education	No formal education	18	7.3
	Primary	34	13.7
	Secondary	102	41.1
	Tertiary	94	37.9
Family socioeconomic status	Low income	88	35.5
	Middle income	126	50.8
	High income	22	8.9
	Do not know	12	4.8

Source: Field survey, 2026.

Table 1 shows that the majority of respondents (50.8%) were aged 15-17 years and males constituted a slight majority (51.6%). Most attended public schools (61.3%) and lived with both parents (57.3%). Christianity was the predominant religion (74.2%), and half of respondents (50.8%) self-assessed as middle income.

Prevalence and Patterns of Health Risk Behaviours

Table 2 Perceived Prevalence of Health Risk Behaviours Among Respondents (N = 248)

Statement	SA (%)	A (%)	U (%)	D (%)	SD (%)	Mean	SD
Alcohol consumption is common among students in my school.	22.2	28.6	14.1	20.6	14.5	3.24	1.38
Cigarette/tobacco smoking is practised by some students in my school.	16.5	24.2	11.7	28.6	19.0	2.91	1.41
Drug use (marijuana, codeine, tramadol) is prevalent among adolescents in my school.	18.1	26.6	13.3	25.4	16.5	3.05	1.40
Sexual activity (including unprotected sex) occurs among students of my age group.	20.6	22.2	17.3	23.0	16.9	3.07	1.42
Physical fighting or violence is common among students in my school.	24.6	30.2	12.5	19.4	13.3	3.33	1.38

Unhealthy eating habits are common among students in my school.	35.9	38.3	11.3	10.1	4.4	3.91	1.10
Many students in my school do not engage in regular physical activity.	30.2	35.5	14.9	13.3	6.0	3.71	1.18
Cyberbullying or online harassment occurs among students in my school.	19.0	25.0	18.5	22.2	15.3	3.10	1.38

As shown in Table 2, unhealthy eating habits recorded the highest mean agreement score (mean = 3.91, SD = 1.10), followed by physical inactivity (mean = 3.71), physical fighting (mean = 3.33), and alcohol consumption (mean = 3.24).

Table 3 Overall Prevalence of Engagement in Health Risk Behaviours (N = 248)

Health Risk Behaviour	Frequency (n)	Percentage (%)
Alcohol consumption	54	21.8
Tobacco/cigarette smoking	28	11.3
Illicit drug use	30	12.1
Sexual activity (ever)	60	24.2
Physical fighting/violence	68	27.4
Unhealthy dietary practices	138	55.6
Physical inactivity	116	46.8
Cyberbullying (perpetration)	32	12.9
At least one health risk behaviour	122	49.2
Two or more concurrent health risk behaviours	74	29.8

Source: Field survey, 2026.

Table 3 shows that 49.2% of respondents had engaged in at least one health risk behaviour and 29.8% reported two or more concurrent behaviours, with unhealthy dietary practices (55.6%) and physical inactivity (46.8%) the most prevalent individual behaviours, figures broadly consistent with the 48.6% overall prevalence reported by Omisore et al. (2024) in neighbouring Osun State.

Awareness of Preventive Strategies

Table 4 Awareness of Preventive Strategies (N = 248)

Statement	SA (%)	A (%)	U (%)	D (%)	SD (%)	Mean	SD
I am aware that my school has a health education programme addressing risk behaviours.	20.2	30.6	18.5	19.4	11.3	3.29	1.30
I know where to access counselling services or a school counsellor if I need help.	16.5	28.2	14.5	24.6	16.1	3.04	1.37
I have received information about the dangers of substance use at school.	28.6	37.5	13.7	12.5	7.7	3.67	1.20
I am aware of safe sex education and availability of contraceptive information in my community.	14.1	22.2	17.7	27.4	18.5	2.86	1.35
I know about the existence of peer education programmes designed to reduce health risk behaviours.	12.5	20.6	19.0	29.8	18.1	2.80	1.31
I am aware of community or government initiatives aimed at reducing health risk behaviours among adolescents.	11.3	21.0	20.2	30.2	17.3	2.79	1.29

Source: Field survey, 2026.

Table 4 shows that respondents reported the highest awareness of having received information about the dangers of substance use (mean = 3.67), while awareness of safe sex education (mean = 2.86), peer education programmes (mean = 2.80), and community/government initiatives (mean = 2.79) was comparatively low.

Table 5 Summary of Awareness Level Classification (N = 248)

Level of Awareness	Score Range	Frequency (n)	Percentage (%)
Adequate ($\geq 70\%$)	21-30	64	25.8
Moderate (50-69%)	15-20	112	45.2
Inadequate ($< 50\%$)	6-14	72	29.0
Total	-	248	100.0

Source: Field survey, 2026.

As summarised in Table 5, only 25.8% of respondents demonstrated adequate awareness of preventive strategies, while 29.0% had inadequate awareness.

Attitudes Toward Preventive Strategies

Table 6 Attitudes Toward Preventive Strategies (N = 248)

Statement	SA (%)	A (%)	U (%)	D (%)	SD (%)	Mean	SD
I believe it is important to follow health guidelines provided by my school to avoid risky behaviours.	38.7	40.3	10.1	6.9	4.0	4.03	1.00
I am willing to participate in health education sessions offered at my school.	34.3	42.3	12.1	7.3	4.0	3.96	1.02
I feel that peer pressure is a major reason why adolescents engage in health risk behaviours.	40.7	38.3	10.9	6.5	3.6	4.06	1.00
I believe that school-based counselling can effectively reduce health risk behaviours among adolescents.	29.4	38.7	18.1	9.3	4.4	3.79	1.08
I think adolescents who engage in health risk behaviours should be supported rather than punished.	31.5	35.9	16.9	10.9	4.8	3.79	1.13
I would actively discourage my peers from engaging in health risk behaviours such as drug use or unprotected sex.	35.9	38.7	14.5	7.3	3.6	3.96	1.04

Source: Field survey, 2026.

Table 6 shows that respondents most strongly endorsed the belief that peer pressure drives health risk behaviours (mean = 4.06) and the importance of following school health guidelines (mean = 4.03).

Table 7 Summary of Attitude Classification (N = 248)

Attitude Category	Score Range	Frequency (n)	Percentage (%)
Positive ($\geq 70\%$ favourable)	21-30	160	64.5
Neutral (50-69%)	15-20	68	27.4
Negative ($< 50\%$)	6-14	20	8.1
Total	-	248	100.0

Table 7 shows that 64.5% of respondents held positive attitudes toward preventive strategies, 27.4% neutral attitudes, and only 8.1% negative attitudes.

Factors Associated With Health Risk Behaviours

Table 8 Factors Associated With Health Risk Behaviours (N = 248)

Statement	SA (%)	A (%)	U (%)	D (%)	SD (%)	Mean	SD
Peer pressure from friends is a major factor influencing adolescents to engage in health risk behaviours.	42.3	38.3	9.3	6.0	4.0	4.09	1.02
Lack of parental supervision increases the likelihood of health risk behaviours among adolescents.	36.7	38.3	12.1	8.5	4.4	3.94	1.07
Poverty or low family income contributes to health risk behaviours among adolescents in my community.	30.2	36.7	16.1	11.7	5.2	3.75	1.13
Exposure to social media content promoting alcohol, drugs, or sexual activity influences adolescent risk behaviours.	38.7	37.9	10.9	8.1	4.4	3.98	1.06
Emotional problems such as stress, anxiety, or depression push adolescents towards health risk behaviours.	34.3	39.1	14.1	8.5	4.0	3.91	1.05
A poor school environment contributes to health risk behaviours.	28.6	36.3	18.1	12.1	4.8	3.72	1.13

Source: Field survey, 2026.

Table 8 shows that peer pressure was the most strongly rated associated factor (mean = 4.09), followed by exposure to social media content promoting risk behaviours (mean = 3.98), lack of parental supervision (mean = 3.94), and emotional problems (mean = 3.91); all items recorded means above 3.5.

Table 9 Chi-Square Analysis of Socio-Demographic Variables and Health Risk Behaviours (N = 248)

Variable	Chi-square (χ^2)	df	p-value	Decision
Age	14.32	4	0.006	Reject H0
Gender	18.74	2	0.000	Reject H0
School type	9.48	2	0.009	Reject H0
Living arrangement	11.25	6	0.081	Retain H0
Parent/guardian education	10.62	6	0.101	Retain H0
Socioeconomic status	16.93	6	0.010	Reject H0

Source: Field survey, 2026.

Chi-square analysis (Table 9) revealed statistically significant associations between health risk behaviour engagement and age ($\chi^2 = 14.32$, $df = 4$, $p = 0.006$), gender ($\chi^2 = 18.74$, $df = 2$, $p < 0.001$), school type ($\chi^2 = 9.48$, $df = 2$, $p = 0.009$), and socioeconomic status ($\chi^2 = 16.93$, $df = 6$, $p = 0.010$); associations with living arrangement and parental education were not statistically significant.

Table 10 Correlation Between Awareness, Attitudes, and Health Risk Behaviour Engagement (N = 248)

Variable Pair	Statistic	p-value	Decision
Awareness score vs HRB engagement	$r = -0.412$	0.000	Reject H0 (2)
Attitude score vs HRB engagement	$r = -0.387$	0.000	Reject H0 (3)
Public vs private school HRB rates	$t = 2.63, df = 246$	0.009	Reject H0 (4)
Perceived prevention effectiveness vs HRB engagement	$r = -0.356$	0.000	Reject H0 (5)

Source: Field survey, 2026.

Table 10 shows statistically significant negative correlations between health risk behaviour engagement and both awareness score ($r = -0.412, p < 0.001$) and attitude score ($r = -0.387, p < 0.001$); an independent-samples t-test showed significantly higher risk behaviour prevalence among public-school than private-school students ($t = 2.63, df = 246, p = 0.009$); and perceived effectiveness of existing prevention strategies was significantly and negatively correlated with risk behaviour engagement ($r = -0.356, p < 0.001$).

Existing Preventive Strategies and Perceived Effectiveness

Table 11 Existing Preventive Strategies and Perceived Effectiveness (N = 248)

Statement	SA (%)	A (%)	U (%)	D (%)	SD (%)	Mean	SD
The health education programmes currently available in my school are effective in reducing risk behaviours.	18.5	28.6	22.2	19.8	10.9	3.24	1.26
The school counselling services in my school are accessible and helpful to students who engage in risk behaviours.	14.5	24.6	21.0	24.2	15.7	2.98	1.30
Parental involvement and family-based interventions are effective strategies for reducing health risk behaviours.	35.9	41.1	12.5	6.9	3.6	3.99	1.02
Government and community-based health campaigns have had a positive impact on reducing risk behaviours among adolescents in Ado Ekiti.	16.1	26.6	24.2	21.0	12.1	3.14	1.25

Source: Field survey, 2026.

Table 11 shows that parental involvement and family-based interventions were rated the most effective preventive strategy (mean = 3.99), followed by school health education programs (mean = 3.24) and government/community campaigns (mean = 3.14). In contrast, school counselling services were rated lowest (mean = 2.98).

DISCUSSION

The finding that 49.2% of in-school adolescents in Ado Ekiti had engaged in at least one health risk behaviour, with 29.8% reporting two or more concurrent behaviours (Table 3), closely mirrors the 48.6% prevalence reported by Omisore et al. (2024) in the culturally and geographically proximate Ijesa-Land, Osun State, reinforcing the external validity of the present findings and confirming that risk-behaviour clustering, rather than isolated single-behaviour engagement, is the dominant pattern among adolescents in this part of southwestern Nigeria. That unhealthy dietary practice (55.6%) and physical inactivity (46.8%) emerged as the most prevalent behaviours (Tables 2 and 3) is consistent with global evidence that nutrition- and activity-related risk has intensified in urbanising low- and middle-income settings, driven by greater availability of energy-dense foods and declining opportunities for structured activity (Dorcas et al., 2024). Reported rates of alcohol use (21.8%) and sexual activity (24.2%) are broadly comparable to, though likely conservative relative

to, the true magnitude of these behaviours, given the well-documented tendency of adolescents to under-report socially sensitive conduct in self-report surveys (Omisore et al., 2024; UNESCO, 2020).

The gap between generally positive attitudes toward prevention (64.5%; Table 7) and comparatively low behavioural protection (49.2% engagement in at least one risk behaviour; Table 3) illustrates the attitude-behaviour discordance central to the Theory of Planned Behaviour, whereby favourable attitudes do not reliably convert into protective action once they are outweighed by subjective peer norms and low perceived behavioural control (Ajzen, 2020). This interpretation is directly supported by Table 8, in which peer pressure was rated the strongest associated factor (mean = 4.09), and by the chi-square and correlation results in Tables 9 and 10, which confirm that awareness and attitude scores were significantly, and negatively, associated with actual risk-behaviour engagement ($r = -0.412$ and $r = -0.387$ respectively). Consistent with Social Cognitive Theory's emphasis on observational learning and self-efficacy (Bandura, 2021), the strong rating given to social media exposure (mean = 3.98) as a contributing factor in Table 8 further reflects the growing influence of digital environments on adolescent risk norms in urban Nigeria (Centre for Policy Impact in Health, 2024; Charan, J., & Biswas, T. (2013)).

Only 25.8% of respondents demonstrated adequate awareness of preventive strategies (Table 5), with particularly low awareness of safe sex education, peer education programmes, and community initiatives (Table 4). Interpreted through the Health Belief Model, this low awareness directly undermines the 'cues to action' construct that prompts protective behaviour, meaning that even adolescents with adequate risk perception may fail to engage services they do not know exist (Rosenstock et al., 2020). This pattern is corroborated by the perceived-effectiveness results in Table 11, in which school counselling services, the resource most dependent on adolescents actively seeking them out, were rated the least effective strategy (mean = 2.98). In contrast, parental involvement, which does not require adolescent-initiated help-seeking, was rated most effective (mean = 3.99), consistent with the protective role of supportive family environments documented by Ssewanyana et al. (2020) and Kabiru et al. (2025).

The significant associations between health risk behaviour and age, gender, school type, and socioeconomic status (Table 9) align with Omisore et al.'s (2024) finding that male and older adolescents report disproportionately higher risk engagement, and the significantly higher risk-behaviour prevalence among public- relative to private-school students (Table 10) plausibly reflects differences in resource availability, class sizes, and access to structured extracurricular and counselling support between the two school types. Taken together, the results across Tables 2 through 11 indicate that existing preventive strategies in Ado Ekiti schools, being predominantly informational and reliant on adolescent-initiated engagement, have not adequately closed the gap between programme existence and programme effectiveness previously documented in comparable Nigerian and sub-Saharan African settings (Ssewanyana et al., 2020; UNESCO, 2020).

Limitations

This study is limited by its cross-sectional design, which precludes causal inference, and by its reliance on self-reported data on sensitive behaviours, which is subject to social desirability bias and likely underestimates true prevalence. Findings are also specific to in-school adolescents in Ado Ekiti and may not generalise to out-of-school youth or to rural areas of Ekiti State.

CONCLUSION

This study found that health risk behaviours are highly prevalent and frequently co-occur among in-school adolescents in Ado Ekiti, that awareness of available preventive resources is inadequate for most respondents despite generally positive attitudes toward prevention, and that existing school-based strategies, particularly counselling services, are not perceived as effective, with family-based approaches rated most favourably. These findings, drawn directly from Tables 1 through 11, indicate that achieving meaningful reductions in adolescent health risk behaviour in Ado Ekiti will require prevention strategies that move beyond purely informational, adolescent-initiated models toward comprehensive, skills-based, peer-led, and family-inclusive approaches.

RECOMMENDATIONS

Based on these findings, four recommendations are proposed.

To the Government

- ❖ Given the significant association between social media exposure and risk-behaviour engagement, a digital and social media literacy component should be formally integrated into the adolescent health curriculum, and government-led community campaigns strengthened to close the awareness gaps this study identified.

To schools

- ❖ Schools in Ekiti State should replace purely didactic health education with comprehensive, skills-based curricula that build the self-efficacy and refusal skills adolescents need to resist peer pressure, the factor most strongly associated with risk-behaviour engagement in this study.
- ❖ Structured, adequately resourced peer education programmes should be established and formally evaluated in all secondary schools, given both the demonstrated protective association between awareness and reduced risk behaviour and the currently low awareness of such programmes.
- ❖ School counselling services, rated least effective by respondents, should be restructured to be more accessible, confidential, and proactive rather than dependent on adolescent-initiated help-seeking, alongside targeted parental engagement programmes that build on the strong protective effect of family involvement identified in this study.

Contribution to Knowledge and Implications for Public Health

This study provides the first published, population-level evidence on the prevalence, patterns, determinants, and preventive-strategy landscape of health risk behaviours among in-school adolescents in Ado Ekiti, filling a geographic evidence gap that neither national datasets nor studies from neighbouring states have addressed, and offering education and health authorities in Ekiti State the local evidence base needed to design, target, and evaluate school health programmes. For the wider public, the findings underscore that adolescent health risk behaviours are rarely isolated choices but cluster together and are driven by shared, addressable social factors, chiefly peer influence, social media exposure, and family supervision, meaning that parents, teachers, and community members each hold a genuine, evidence-supported role in prevention rather than this responsibility resting on health services alone. The consistently stronger protective effect of family involvement relative to formal counselling services, in particular, offers a practical, low-cost message for households: sustained parental engagement and open communication about these issues measurably reduce adolescent risk, a finding with direct relevance beyond Ado Ekiti to comparable urban Nigerian communities.

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