

PERCEPTION OF IN-SCHOOL ADOLESCENTS ABOUT ADOLESCENT-FRIENDLY CHARACTERISTICS OF HEALTHCARE SERVICES RECEIVED IN IBADAN METROPOLIS, NIGERIA

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ABSTRACT

Introduction: Adolescence was previously assumed to be a disease free stage of life. It is however now known that adolescents are not only involved in risky health behaviours but they also have their own share of health problems that other age groups face. The adolescent-friendly model helps to create adolescent-responsive health systems, Nigeria currently has no country-specific report on the adolescent-friendly characteristics of the health services rendered to her adolescents. This study identified various health problems for which in-school adolescents in Ibadan North-East Local Government Area sought healthcare and determined their perception of received healthcare services with regards to its "adolescent-friendliness".

Methods: This was a school-based cross-sectional study that utilized quantitative method of data collection. A multi-stage systematic random sampling technique was employed to select 500 students for school survey. Self-administered, semi-structured questionnaire was used to collect data. Descriptive statistics and Chi-square test at $\alpha=0.05$ were used for data analysis.

Results: Perceived malaria (52.4%), acne (36.2%), menstrual pain (17.0%) and depression (3.0%) were the common health problems adolescents sought health care for. Majority of the adolescents perceived the health services received as being adolescent-friendly. These health services were perceived to be accessible by (87%), acceptable by (93.2%), appropriate by (81.4%), effective by (91.4%), and equitable by (82.2%) of the respondents. Adolescents who sought mental care perceived least adolescent-friendliness of received healthcare services.

Conclusion: Adolescents in Ibadan currently view received health services as adolescent-friendly. However, the management of mental health problems in adolescents should incorporate adolescent friendly elements entrenched at every level of the health system.

Keywords: In-school adolescents, Adolescent health problems, Adolescent-friendly health services, Health seeking behaviour, Nigeria.

INTRODUCTION

Adolescence is a stage that many expect to be free of health problems¹ but there have been very little improvement in mortality rates of adolescents over the decades². Adolescent health problems stem from two main sources. First, adolescence is a key period for the initiation and adoption of risky health behaviours that often leads to health problems³. Secondly, adolescents have their own share of health problems faced by other age groups, for example, adolescents in Sub-Saharan Africa are currently faced with a double burden of both communicable and non-communicable diseases just like the other age groups in the region^{2,4,5}.

Globally, about 1.5 million young people died from preventable or treatable causes in 2012 which were mainly depression, road traffic injuries, anaemia, HIV/

AIDS and self-harm². The main cause of death among the youths in Africa in 2010 were HIV and AIDS (53.0%), maternal conditions (16.7%), tuberculosis (4.5%), sexually transmitted diseases excluding HIV/AIDS (17%), and malaria (1.5%)⁶. The appropriate response to avert death from these diseases among African young people is the provision of adolescent-friendly healthcare to adolescents amidst other intervention package.

The nature of health services required by adolescents as documented by international health organizations^{6,7,8} are:

- Pubertal issues (Adolescent Growth and Development, Pubertal delay or precocity, Weight and height issues).

- Sexual and reproductive health (Gynaecological and menstrual problems, contraception, pregnancy testing and option, STD/HIV screening counselling and treatment, sexual & reproductive health education).
- Psycho-social issues (relationship development, adjustment problems, growing-up issues).
- Nutrition issues (healthy eating during adolescence, anaemia prevention and management, under-nutrition and obesity, eating disorders (Anorexia nervosa, bulimia nervosa, binge Disorder)).
- Immunization.
- Safety and injury prevention.
- Chronic conditions like (asthma, diabetes, hypertension, renal disorders), eye care, ENT care, dental care.
- Preventive health check-ups, like, annual check-up, pre-college health check-up, pre-marital counselling etc.
- Adolescent Mental Health such as psychiatric disorders (depression, anxiety, bipolar, personality disorder), and Substance abuse including tobacco and alcohol.

The WHO designed the adolescent-friendly health services model to modify the pattern of healthcare delivery to adolescents in order to increase utilisation of health services and ultimately reduce mortality among adolescents⁸. The characteristics of adolescent-friendly health services are “accessibility, equitability, acceptability, appropriateness, comprehensiveness, effectiveness and efficiency of healthcare services to all adolescents and at all times”⁸. The health facilities are also expected to be adolescent-friendly and possess attributes such as allocated time slot, allocated area, dedicated attention and longer interaction time, privacy and confidentiality, service packages, orientation and training of the providers (caring, non-judgemental, interpersonal skill, supportive attitude towards the adolescent).^{2,6,8}

Adolescent-friendly health services concept is drawn from the perspective that adolescents and young people deserve health services of high standards^{9,10}. Over the past decade, international health bodies have emphasised that applying the adolescent-friendly framework in healthcare delivery will immensely improve the quality of healthcare services rendered to adolescents¹¹. Hence, the adolescent-friendly model is being increasingly employed to deliver healthcare services to adolescents in high-income countries^{12,13}.

Sadly, most adolescents in the developing countries still do not have access to adolescent-friendly health

services¹⁴. Lack of adolescent-friendliness at various service delivery points of healthcare in developing countries has been linked to the increasing prevalence of adolescents’ health problems as adolescents tend to avoid health facilities with unfriendly health providers and seek healthcare from alternative informal sources^{15,16}.

Incorporating the adolescent-friendly model fully into healthcare system is an effective approach to create adolescent responsive health systems¹⁷. It will also help to actualise the SDG 3 spearheaded by the United Nations by the year 2030¹⁴. Currently, Nigeria has no country-specific report on the state of health services delivered to adolescents in relation to its adolescent-friendly characteristics. There is a need for an assessment of Nigerian adolescents’ perception about the “adolescent-friendliness” of health services that they receive as this will provide insight into how they see the health services currently available to them. This study described the health problems that adolescents in Ibadan North East Local Government area of Nigeria sought health care for in the past and also determined the perception of in-school adolescents on the “adolescent-friendliness” of the healthcare services they received in Ibadan, Nigeria.

METHODS

Study Area

The study was conducted in Ibadan. Ibadan is located in South-Western Nigeria, it is the capital of Oyo State and the third largest city in Nigeria covering an area of 128 km² (National Population Commission, 2006). Most dwellers of the city are from Yoruba tribe and minority are from other ethnic groups. There are five urban local government areas in Ibadan city and six semi-urban local government areas in its suburbs.

Ibadan North-East local government area (LGA), is one of the five urban LGA in Ibadan metropolis. The city is located in the South-western part of Nigeria. The local government had 34 public and 24 private secondary schools as at the time of this study.

There were 48 primary and two secondary healthcare facilities which were under the administration of the State Ministry of Health. There were also two tertiary health facilities located in the adjacent Ibadan North LGA which also provide health care services for the residents of Ibadan North-East LGA.

Study Design

This study was a descriptive cross-sectional study design which utilised quantitative data.

Sample Size Determination

The sample size was calculated using the formula for estimating single proportions in an infinite population¹⁸. The proportion of adolescents who perceived healthcare services to be accessible (one of the characteristics of adolescent-friendly health services) in South-West Nigeria was 74.0%¹⁹ with a non-response rate of 10% and design effect of 1.5 (due to the clustering nature of schools) gave a minimum sample size of 500.

Sampling Technique

A multi-stage systematic random sampling technique was employed. First, simple random sampling was used to select five public and private secondary schools each from the list of registered secondary schools. Secondly, six arms of classes were randomly selected from both the junior class (JSS 1-3) and senior class (SSS 1-3) using the balloting technique method. Finally, systematic random sampling was used to select the students with the class register as sampling frame.

Study Instruments

A pre-tested, self-administered, semi-structured questionnaire was used to obtain data. The questions provided data about the socio-demographic characteristics of respondents, health problems for which they sought help in the last 6 months before the survey and perceived adolescent-friendliness of healthcare services received in the past six months before survey.

Data Management and Analysis

Statistical Package for Social Sciences (SPSS) version 20.0 was used for data entry and statistical analysis. The socio-economic class of respondents was computed using the socio-economic index scores of Oyedepi²⁰. These scores were based on the occupation and educational attainment of both parents and the mean of the four scores (two for each parent) approximated to the nearest whole number was the social class assigned to the study participant. Socio-economic class I was the highest and class V was the lowest. The socio-economic class of the study participants was then re-classified into high social class (class I and II), middle social class (class III) and low social class (class IV and V).

The reported health problems that they sought health care for was further regrouped into five categories; General body appearance issues, Nutrition problems, Sexual and reproductive health issues, Mental and emotional health problems and Survival and general health risks^{6,21,22}. The time period when respondents sought healthcare for various health problems was grouped into three (3) variables; recently/one (1)

month ago, about 3-6 months ago and no healthcare visit.

A 35-item set of statements assessed on a 5-point Likert scale was used to measure respondents' level of perception regarding the adolescent-friendly components (accessibility (9-item), acceptability (16-item), effectiveness (4-item), equitable (3-item) and appropriateness (3-item)) of healthcare service last received.

Examples of the statements are:

- "The health facility was easily accessible to me because of its convenient location."
- "The health facility had convenient working hours."
- "The healthcare provider was easy to relate with"
- "The waiting period before I received health service, I wanted was reasonable."
- "The health provider dedicated sufficient time to deal effectively with my health issue(s)."

A mean value of five (5) was obtainable for each component of adolescent-friendly characteristics; mean value ranging from 0-2.49 was categorised as poor perception while mean value of 2.50-5.0 indicated good perception from respondents. The mean values of the different components of adolescent-friendly health service was then summed up and an overall mean value was computed which form the overall score for adolescent friendly health service. A mean value ranging from "0-2.49" and "2.5-5.0" indicated that the respondents "did not receive" and "did receive" adolescent-friendly health service respectively.

Univariate analysis generated frequencies and means of relevant variables. The health problems the adolescents sought healthcare for was cross-tabulated with their perceived friendliness of received healthcare services. Selected socio-demographics characteristics were also cross-tabulated with the adolescent-friendly components of received healthcare services. Chi-square test was used to test associations between variables at 5% level of significance.

Ethical Considerations

Ethical approval was obtained from the Oyo State Research Ethical Review Committee and permission was sought from principal of each selected school for the study to be conducted. Selected participants were given consent forms for parental consent a day before the survey and only those who returned signed forms and gave assent were included in the study. No personal identifier was used throughout the study.

Table 1: Socio-Demographic characteristics of respondents in Ibadan North-East Local Government Area of Oyo State, Nigeria

Socio-demographic characteristics	Number	Percentage
Gender		
Male	221	44.2
Female	279	55.8
Age (years)		
10-14	300	60.0
15-19	200	40.0
School Type		
Private secondary schools	250	50.0
Public secondary schools	250	50.0
School class		
*JSS1-3	240	48.0
#SSS1-3	260	52.0
Who respondent presently lives with		
Both parents	400	80.0
Father alone	19	3.8
Mother alone	51	10.2
Relatives	30	6.0
Social class		
High	276	55.2
Middle	193	38.6
Low	31	6.2
Health facility visited in the last 6 months		
Government owned	238	47.6
Privately owned	255	51.0
Charity- based (NGO)	3	0.6
Faith-based	4	0.8
Category of facility visited		
Primary	214	42.8
Secondary	196	39.2
Tertiary	90	18.0

*JSS: Junior secondary school _____ #SSS: Senior secondary school

RESULTS

Socio-demographic characteristics of respondents

All the selected adolescents participated in the survey giving a response rate of 100.0%. About half (55.8%) were females, the age range was 10-19 years and mean age was 13.7 (\pm 2.1) years. The other sociodemographic characteristics are shown in Table 1.

Health problems that respondents had 6 months before the survey

The commonest health problems adolescents sought health care for recently (one month prior to the study) were perceived malaria (52.4%), acne (36.2%), menstrual pain (17.0%) and depression (3.0%) (Figure 1).

It was observed significantly that respondents who attended public schools (59.6%) significantly sought healthcare for perceived malaria more than their counterparts in private schools (45.2%) ($p < 0.01$).

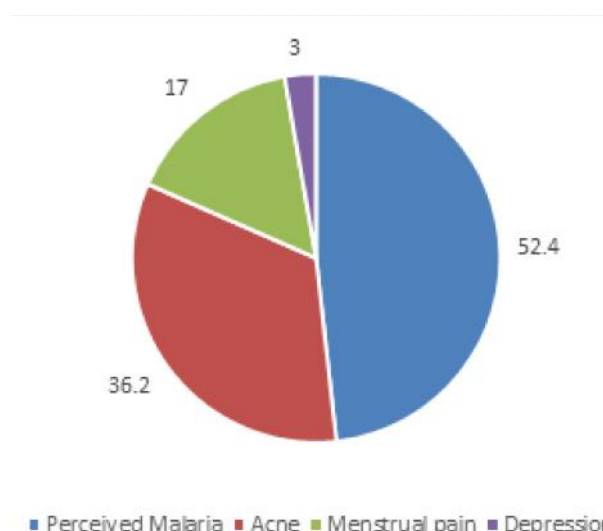


Figure 1: Frequency distribution of health problems for which respondents sought healthcare in the last six months preceding survey

Table 2: Association between selected health problems respondents sought healthcare for in the last six months before survey and selected socio-demographic characteristics

Socio-demographics	Health Problems			X ²	p-value
		Perceived Malaria			
	1 month	3-6 months	No health visit		
Age					
10-14	160 (53.3)	82 (27.3)	58 (19.3)	1.99	0.03
15-19	102 (51.0)	49 (24.5)	49 (24.5)		
School Type					
Privately owned	113 (45.2)	72 (28.8)	65 (26.0)	11.18	<0.01
Publicly owned	149 (59.6)	59 (23.6)	42 (16.8)		
		Menstrual Pain			
Age					
10-14	25 (14.6)	8 (4.7)	138 (80.7)	63.29	<0.01
15-19	54 (50.0)	18 (16.7)	36 (33.3)		
Class in group					
JSS 1-3	10 (7.6)	4 (3.1)	117 (89.3)	83.31*	<0.01
SSS 1-3	69 (46.6)	22 (14.9)	57 (38.5)		
		Depression			
Gender					
Male	6 (2.7)	9 (4.1)	206 (93.2)	1.65	0.44
Female	9 (3.2)	6 (2.2)	264 (94.6)		
Age					
10-14	6 (2.0)	3 (1.0)	291 (97.0)	13.20*	<0.01
15-19	9 (4.5)	12 (6.0)	179 (89.5)		
Class in group					
JSS 1-3	4 (1.7)	3 (1.2)	233 (97.1)	8.41*	0.02
SSS 1-3	11 (4.2)	12 (4.6)	237 (91.2)		

*Fisher's exact test reported because an observed cell value is less than five (5)

Table 3: Association between respondents' perceived adolescent-friendly nature of received healthcare services and health problems they sought healthcare for in the preceding six months*

Adolescent health problems	Adolescent-friendly characteristics of health services		p-value
	Accessible health service		
	Good perception	Poor perception	
General body appearance issues	1 (50.0)	1 (50.0)	7.67
Nutrition problem	19 (76.0)	6 (24.0)	
Sexual and reproductive health issues	71 (81.6)	16 (18.4)	
Mental and emotional health problems	1 (7.1)	13 (92.9)	
Survival and general health risks	331 (89.0)	41 (11.0)	
	Acceptable health service		
General body appearance issues	0 (0.0)	2 (100.0)	19.09
Nutrition problem	20 (80.0)	5 (20.0)	
Sexual and reproductive health issues	80 (92.0)	7 (8.0)	
Mental and emotional health problems	2 (14.3)	12 (85.7)	
Survival and general health risks	354 (95.2)	18 (4.8)	
	Appropriate health service		
General body appearance issues	2 (100.0)	0 (0.0)	9.42
Nutrition problem	15 (60.0)	10 (40.0)	
Sexual and reproductive health issues	76 (87.4)	11 (12.6)	
Mental and emotional health problems	2 (14.3)	12 (85.7)	
Survival and general health risks	302 (81.2)	70 (18.8)	
	Effective health service		
General body appearance issues	0 (0.0)	2 (100.0)	11.88
Nutrition problem	21 (84.0)	4 (16.0)	
Sexual and reproductive health issues	79 (90.8)	8 (9.2)	
Mental and emotional health problems	1 (7.1)	13 (92.9)	
Survival and general health risks	344 (92.5)	28 (7.5)	
	Equitable health service		
General body appearance issues	1 (50.0)	1 (50.0)	1.91
Nutrition problem	19 (76.0)	6 (24.0)	
Sexual and reproductive health issues	72 (82.8)	15 (17.2)	
Mental and emotional health problems	3 (21.4)	11 (78.6)	
Survival and general health risks	308 (82.8)	64 (17.2)	

*Fisher's exact test reported because an observed cell value is less than five (5)

Table 4: Association between respondents' socio demographic characteristics and their perceived accessibility and acceptability of the healthcare services received in the preceding six months

Socio-demographics	Adolescent-friendly characteristics of received healthcare service		X ²	p-value
	Good perception	Poor perception		
Accessible healthcare service				
Gender				
Male	188 (85.1)	33 (14.9)	1.31	0.25
Female	247 (88.5)	32 (11.5)		
Age				
10-14	265 (88.3)	35 (11.7)	1.18	0.28
15-19	170 (85.0)	30 (15.0)		
Class in group				
JSS 1-3	205 (85.4)	35 (14.6)	1.02	0.31
SSS 1-3	230 (88.5)	30 (11.5)		
Social class				
High	243 (88.0)	33 (12.0)	0.65*	0.72
Middle	165 (85.5)	28 (14.5)		
Low	27 (87.1)	4 (12.9)		
Live with				
Both parents	355 (88.8)	45 (11.2)	5.42	0.02
Others	80 (80.0)	20 (20.0)		
Acceptable health service				
Gender				
Male	200 (90.5)	21 (9.5)	4.56	0.03
Female	266 (95.3)	13 (4.7)		
Age				
10-14	282 (94.0)	21 (9.5)	0.76	0.38
15-19	184 (92.0)	13 (4.7)		
Class in group				
JSS 1-3	223 (92.9)	17 (7.1)	0.06	0.81
SSS1-3	243 (93.5)	17 (6.5)		
Social class				
High	263 (95.3)	13 (4.7)	4.23*	0.12
Middle	175 (90.7)	18 (9.3)		
Low	28 (90.3)	3 (9.7)		
Live with				
Both parents	376 (94.0)	24 (6.0)	2.02	0.16
Others	90 (90.0)	10 (10.0)		

*Fisher's exact test reported because an observed cell value is less than five (5)

Also, respondents aged 10-14 years (53.3%) sought healthcare for perceived malaria slightly more than the older respondents (51.0%) ($p=0.03$). Regarding menstrual pain, female respondents in senior classes (46.6%) and those aged 15-19 years (50.0%) sought healthcare for menstrual pain more than their counterparts in junior classes (7.6%) and those aged 10-14 years (14.6%). More male respondents (4.1%) compared with their female counterparts (2.2%) sought health care for depression. Respondents aged 15-19 years (6.0%) and those in SSS 1-3 (4.6%) significantly sought healthcare for depression than the other groups (Table 2).

Pattern of healthcare facilities utilisation in the last six months before survey

The patronage of health facilities 6 months prior to the survey showed that 238 (47.6%) of the respondents

visited a public health facility while 51.0% visited private health facility. With regards to the category of health facility, 214 (42.8%) visited a primary health facility while 90 (18.0%) received healthcare service at a tertiary health facility (Table 1). Two hundred and forty-two (48.4%) of the respondents reported that their visit to these health facilities was the first time they patronised the health facilities for healthcare.

Only 165 (33.0%) had not heard the word "Adolescent-friendly health service" before the survey. Majority of the respondents had a good perception that healthcare services last received from a health facility was adolescent-friendly; 435 (87.0%), 466 (93.2%), 407 (81.4%), 457 (91.4%) of the respondents felt the health services were accessible, acceptable, appropriate and effective respectively.

Table 5: Association between selected respondents' socio demographic characteristics and their perceived appropriateness and effectiveness of received health care services in the preceding six months

Socio-demographics	Adolescent-friendly characteristics of received healthcare service		X ²	p-value
	Good perception	Poor perception		
Appropriate healthcare service				
Gender				
Male	179 (81.0)	42 (19.0)		
Female	228 (81.7)	51 (18.3)	0.04	0.84
Age				
10-14	240 (80.0)	60 (20.0)		
15-19	167 (83.5)	33 (16.5)	0.97	0.32
Class in group				
JSS 1-3	188 (78.3)	52 (21.7)		
SSS 1-3	219 (84.2)	41 (15.8)	2.87	0.09
Social class				
High	228 (82.6)	48 (17.4)		
Middle	153 (79.3)	40 (20.7)		
Low	26 (83.9)	5 (16.1)	0.97	0.62
Live with				
Both parents	332 (83.0)	68 (17.0)		
Others	75 (75.0)	25 (25.0)	3.38	0.07
Equitable health service				
Gender				
Male	183 (82.8)	38 (17.2)		
Female	228 (81.7)	51 (18.3)	0.09	0.75
Age				
10-14	256 (85.3)	44 (14.7)		
15-19	155 (77.5)	45 (22.5)	5.03	0.03
Class in group				
JSS 1-3	200 (83.3)	40 (16.7)		
SSS1-3	211 (81.2)	49 (18.8)	0.41	0.52
Social class				
High	228 (82.6)	48 (17.4)		
Middle	154 (79.8)	39 (20.2)		
Low	29 (93.5)	2 (6.5)	4.21*	0.12
Live with				
Both parents	336 (84.0)	64 (16.0)		
Others	75 (75.0)	25 (25.0)	4.43	0.04

*Fisher's exact test reported because an observed cell value is less than five (5)

The association between health problems respondents' sought healthcare for in the past 6 months preceding survey and their perception of the received health service characteristics to be friendly is shown in Table 3. Adolescents who sought healthcare from a health facility for survival and general health risks mostly perceived the received health services as acceptable ($p < 0.01$) and effective ($p = 0.02$) while those who sought healthcare for sexual and reproductive health issues mostly perceived the received health services as overall "adolescent-friendly" ($p < 0.01$). Adolescents who sought healthcare from a health facility for mental and emotional health problems least perceived the received health services as acceptable ($p < 0.01$) (Table 3).

Table 4 showed that adolescents who lived with both parents (88.0%) significantly perceived the received healthcare service as accessible when compared to respondent who live with other persons (80.0%). Significantly, female respondents (95.3%) had a good perception about received healthcare service as they see it as acceptable more than their male counterparts (90.5%). Also, there was a statistically significant association between persons respondents live with and their perception of received healthcare service as acceptable ($p = 0.02$).

Respondents in the junior classes (21.7%) had poor perception about the appropriateness of received health service than those in senior classes (15.8%).

Significantly, older adolescents (22.5%) perceived the received healthcare services as inequitable more than their younger counterparts (14.7%). Also, some of the adolescents who lived with other people aside their parents (25.0%) felt the health services they last received was not equitable compared with those who lived with their parents (16.0%) (Table 5).

DISCUSSION

There were some observed variations in the type of health problems that different categories of adolescents had some months preceding this study and it is important to look into the reasons for these differences. Some of these variations were due to intrinsic factors like gender and the stage of adolescence, while some were as a result of external factors like socio-economic class. An example is the higher percentage of older female adolescents who sought health care for menstrual pain. This is expected since the older female adolescents were more likely to have attained menarche²³ and dysmenorrhoea is a common menstrual problem among adolescents^{24,25}. Menstrual pain has been reported to be a major reason for female gynaecological visits during adolescence in various parts of Nigeria^{26,27} and other countries^{28,29}. In this study, menstrual pain was classified under sexual and reproductive health issue and the adolescents significantly viewed the health services they received for this group of health problems as acceptable and effective. This is crucial because it is important that prompt and effective therapies are provided for menstrual pain management, otherwise, it can result in school absenteeism which can affect academic performance and the quality of life of the adolescents³⁰. The perception about the appropriateness, accessibility and equity of sexual and reproductive health was not significant but more adolescents had positive perception about these attributes regarding the health services they received. It was interesting that they sought health care for menstrual pain instead of self medicating or not seeking orthodox help at all as reported in a previous study in China³⁰. However, self-medication was not explored in this study.

Depression was one of the health problems that these adolescents sought healthcare for, similar to reports in a previous study among adolescents in Soweto, South Africa³¹. It is however disheartening that the services that these adolescents received under the mental and emotional health problems where depression belonged were not seen to be adolescent friendly using the five characteristics of adolescent friendly health services. This may stem from the poor understanding of these group of health problems as they are mostly believed to be due to spiritual causes. There is also a dearth of specialist who provide services specifically for mental

and emotional health problems in Nigeria currently. This situation needs to be addressed urgently in order to prevent untoward consequences of inadequate mental and emotional health care like suicide which appears to be on the rise in the country. The reason why more older adolescents had depression in this study may be as a result of stress since the higher classes have more academic demands and they were more likely to be preparing for major examinations like university entrance examinations which have been identified as the common risk factors of depression in adolescence^{32,33}. This highlights the need for provision of effective depression prevention and management services among adolescents in this age group.

Perceived malaria was classified under survival and general health risk and the treatment received by the adolescents in the preceding 6 months were reported to be significantly acceptable and effective. Malaria is holoendemic in Nigeria and the average health worker in Nigeria is familiar with its treatment as well as many lay persons. This is one of the results of the 'Roll Back Malaria' strategies to control malaria and it can explain the high effectiveness and acceptability of treatment for malaria. The appropriateness, accessibility and equity of the treatments may not be significant but a high proportion had the view that they were adolescent friendly. The higher report of perceived malaria among adolescents attending public schools could be as a result of the higher probability that they were from the middle or low socioeconomic class and would more likely live in areas where mosquitoes abound; hence they would readily interpret any febrile illness to be malaria due to their exposure to mosquitoes. Also, there is a higher probability that their parents/guardians would have low awareness about preventive measures against malaria with low purchasing power to ensure protection from mosquito bites even if they have the required prevention knowledge. This may also be responsible for the school absenteeism and low school grades earlier reported from Nigerian public schools^{34,35}. The differential healthcare seeking for perceived malaria among the younger adolescents may be due to lower immunity against malaria infection since they were more likely to have suffered fewer malaria episodes compared with the older adolescents. The immunity to malaria is partial and it results from previous repeated exposure to malaria disease.

More adolescents in this study sought health care services more from privately-owned health facilities, a shift from an earlier report of higher utilisation of publicly-owned health facilities as reported from Ile-Ife, Nigeria by Omobuwa, *et al.*¹⁵. This change may be because of previous perceived inconsistent delivery

of adolescent-friendly health service to adolescents in Nigerian public health facilities³⁶. Anecdotal report showed that the public health facilities on many occasions lack drugs, vaccine and other necessary equipment required for the smooth operation of health facilities coupled with incessant industrial actions by the health personnel in public hospitals. These negative experiences will make public health facilities to be less adolescent-friendly and could explain the smaller number of adolescents who patronise them.

It appears that most of the adolescents have been utilising orthodox health care services compared to what obtains previously where traditional healers were usually consulted and resort to orthodox health services occurs only when the outcomes were not satisfactory³⁷. This shift may be as a result of perceived reduced efficacy of traditional medicines among Ibadan populace³⁸. This is a welcome development as presentations to hospitals were usually delayed resulting in poor outcomes and waste of resources as the patients present with unwarranted complications which usually result in unnecessary morbidities and mortalities. This positive perception can be leveraged upon by ensuring that each contact be utilised as an excellent opportunity to deliver other healthcare services like immunization and other preventive services. It is also an opportunity to assist them to build positive life skills that can help the adolescents to have stress free transition to adulthood and at the same time forestall the development of risky behaviours. It is therefore important that each visit to health facilities continues to result in a good experience for the adolescents as this will further encourage their subsequent utilisation of orthodox health facilities and a greater possibility of good utilisation of health services in adulthood.

There was a low awareness of the concept of adolescent-friendly health services among these adolescents, similar to reports from an evaluation study by Malawian Ministry of Health in 2014 to assess the scope, quality and outcomes of youth-friendly health services in the country. Only 25% of Malawian adolescents have ever heard of adolescent-friendly health services. Adolescent health is yet to be recognised as a separate entity in Nigeria and this could be the reason for the low awareness about the concept of adolescent-friendly health services. The adolescent health concept is long overdue in Nigeria and it is time for all stakeholders to ensure that adolescent-friendly health services are established in Ibadan.

Many adolescents in this study perceived the health services last received from a health facility as accessible, appropriate, acceptable, effective and equitable, with most rating these services as “adolescent-friendly”.

This implies that health care services were being provided in adolescent-friendly manner thus resulting in a high increased patronage of healthcare services. This is quite similar to what was reported by Wright, *et al.* among adolescents in Lagos, Nigeria. Majority of the adolescents in this Lagos study assessed the selected characteristics of health services last received from a health facility positively such as proximity, comfortable health service, convenient opening hours, sufficient time allocated etc³⁹. This suggests that these adolescents would likely patronise the last visited health facility for care in the event of another health problem based on the reported positive interaction with the health facility. Another implication of this finding is that the adolescents were likely to inform their peers about the positive healthcare experiences they had at the health facilities, which can positively influence their decision to patronise these health facilities for appropriate healthcare services.

Most adolescents who perceived received health service as accessible, equitable and overall as “adolescent-friendly” were currently living with both parents. A plausible explanation could be that an adolescent living with both parents is likely to receive more care and support from the parents including high quality health care services⁴⁰. This can influence the adolescents’ perception of received health service with regards to its adolescent-friendly characteristics. The older adolescents may perceive received health service as inequitable more than the younger adolescents because of their higher cognitive development which could make them have higher expectations from health service providers and have better judgement of the perceived equality or fairness of health services delivered by the health providers.

CONCLUSION

Adolescents in Ibadan North-East LGA had good perception regarding the adolescent-friendly components of health services that they last received from health facilities despite the fact that the concept of adolescent-friendly service provision was yet to be implemented in the study area. There is a need for the creation of awareness on the prevention of the common health problems that these adolescents had especially prevention of depression. Adolescent friendly elements should also be entrenched at every level of the health system.

LIMITATIONS OF THE STUDY

Only in-school adolescents were studied so the findings reported from this study may not be a fair representation of the Nigerian adolescents’ perception of received healthcare services in relation to its adolescent-friendly characteristics.

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