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Psychological Stress and its Associated Factors among In-school Adolescents in Ibadan, Nigeria

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Abstract

The study investigated psychological stress and its associated factors among in-school adolescents in Ibadan, Nigeria. This was a descriptive cross-sectional study that employed a multi-stage sampling to select and assess 400 students from ten secondary schools in Ibadan on their socio-demographic profile, knowledge, prevalence, coping mechanisms and associated factors of psychological stress. Brief-COPE and General Health questionnaires were adopted to assess the prevalence and coping mechanisms of psychological stress among the respondents. Findings revealed that more than half of the respondents (55.8%) had poor knowledge of psychological stress and only a few (6%) had a high level of being psychologically stressed among the in-school adolescents. The most common coping mechanism observed among the respondents was avoidance coping mechanism, specifically “going to the movies” (49.1%); and the factors significantly associated with the prevalence of psychological stress were school, family, physical factors, peer-pressure as well as romantic factors. Binary logistic regression analysis results showed that “Not supported by parents financially (OR: 2.681, 95% CI 1.0-7.1) and finding it difficult to keep up with school work (OR: 0.202, 95% CI 0.04-0.8)” was positively associated with the prevalence of psychological stress among in-school adolescents. The poor knowledge and prevalence of psychological stress observed among the in-school adolescents suggest constant sensitisations among students, parents, teachers and school counsellors.

Keywords: Psychological stress, prevalence, associated factors, adolescents

Introduction

Stress is experienced by everyone as part of the everyday life. It can either have a positive or a negative effect on an individual. Stress can result from

negative events or positive events (Stoppler *et al.*, 2010). Stress is said to be positive when it boosts an individual's energy to achieve a desired goal thereby resulting in happiness and fulfilment while distress occurs when an action or work does not bring happiness or relief (Mathew, 2017). Despite that the perceived effects of stress could either be negative or positive, specifically; stress is defined as the state of psychological and physiological imbalance that results from an individual not being able to manage situational demands of life which can either have a positive or negative effect based on the individual. Excessive stress can lead to poor decision making by disrupting the performance of an individual thereby resulting in a variety of emotional, behavioural and physiological problems (Muhammad and Ahmad, 2010). Psychological stress is a challenging physiological and mental state in which a person lacks the ability to take good decision, manage stress effectively and take care of one's emotions adequately (Famakinwa, Olagunju and Akinnawonu, 2016).

Psychological stress results from events that threaten to disrupt people's daily functioning. They are referred to as stressors (Kemp, 2011) but differ in the degree of severity and duration (Clarke, 2006). The school also contributes a major stressor among in-school adolescents which includes: too much homework, unsatisfactory academic performance, preparation for test/examination, lack of interest in a particular subject, peer pressure, making new friends, teacher-student relationship. These various school stressors can result in psychological stress among adolescents, hence, leading to depression if not adequately managed (Simuforosa, 2013). In addition, poor parent-child communication often contributes to major family stressors and could also result in psychological stress among adolescents (Kemp, 2011). Romantic experiences like intense emotions, breakups, issues of rejection, need for intimacy and support, and could further increase the risk of psychological dysfunction (Davila, Steinberg, Kachadourian, Cobb & Fincham, 2004).

The World Health Organisation stated that half of all mental conditions start by age 14 and most of them go undetected and untreated thus resulting in depression, and suicide which is observed to be the leading cause of deaths among adolescents all over the world (WHO, 2019). About 20% of adolescents around the world are estimated by the World Health Organisation to have mental health problems, yet it remains under-diagnosed and under-treated (WHO, 2019). Studies have shown that the body responds to stress physically or psychologically leading to either physical illnesses or mental disorders. However, psychological stress has been observed to be more prevalent among adolescents than physical illness (Prabu, 2015).

The first step towards preventing any ailment is to identify the factors responsible for it. Also, coping mechanisms among adolescents can be assessed in different ways and they include: observation, self-reports and significant others (e.g., parents and teachers). This has been categorized primarily within

problem-focused and emotion-focused coping mechanisms. Consequently, this study was designed to investigate the level of knowledge of psychological stress, its prevalence, associated factors, and coping mechanisms among in-school adolescents in Ibadan, Oyo State, Nigeria.

Conceptual framework

The conceptual framework that guided this study was the PRECEDE framework, which was first developed by Dr Lawrence Green and colleagues in the 1970's to address the lack of direction and adequacy of public health promotion to sufficiently plan before implementing an intervention (Green and Kreuter, 1999). The PRECEDE is an acronym that stands for predisposing, reinforcing, and enabling constructs in educational environmental diagnosis and evaluation. The model is a diagnostic tool which is used to analyse certain health behaviours. It does not just predict or explain factors linked to the outcomes of interest, but offers a framework for identifying intervention strategies to address these factors. This theory is based on the premise that educational diagnosis of a problem is important when developing and implementing an intervention plan, it also helps to understand the causal factors of any given public health behaviour.

The three key concepts of the PRECEDE framework as applied to this study are explained below and highlighted in Figure 1:

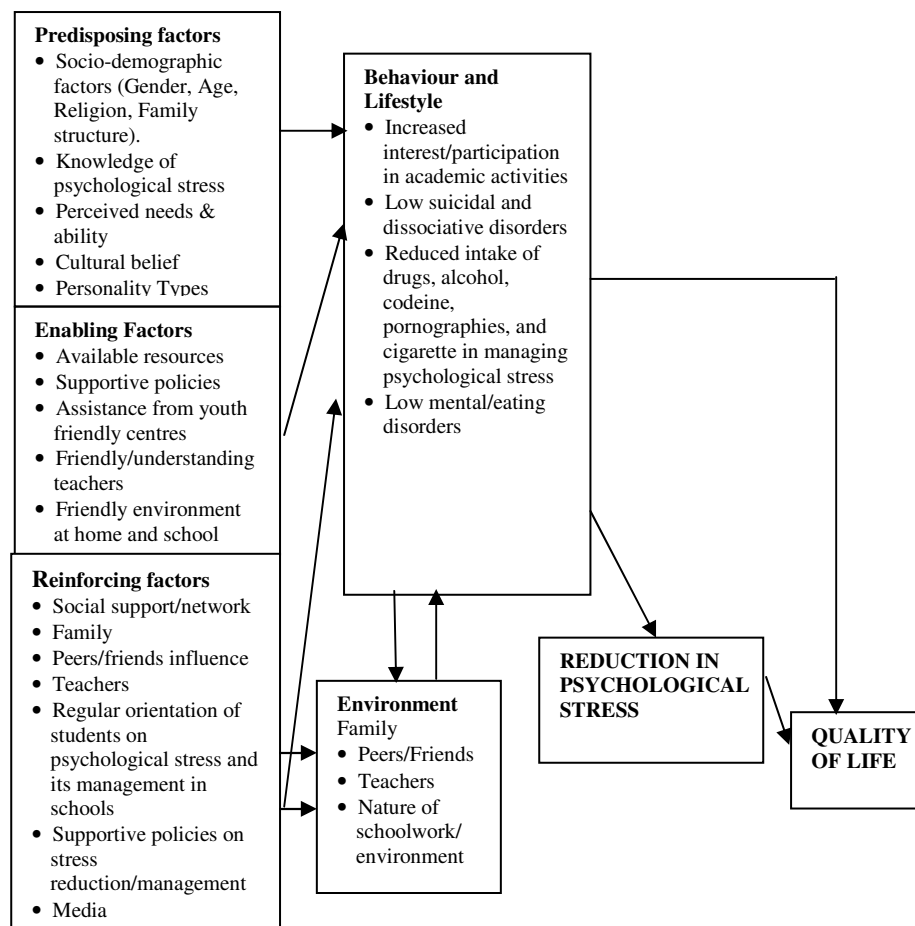
Predisposing factors: are factors that motivate or give reasons for an action. These include: knowledge, attitudes, cultural beliefs, and readiness to change. The predisposing factors applied in this study included adolescents' sociodemographic characteristics, for example, age and its association with psychological stress and knowledge of psychological stress.

Enabling factors: are factors that encourage an individual to behave based on what they are predisposed to do. They are: supportive policies, available resources, assistance, and services. For example, the various coping strategies that helped to reduce the prevalence of psychological stress.

Reinforcing factors: are factors that enforce the desired behaviour change in an individual they are: family, friends and peers that give social support, identity and role definition, economic rewards and social norms that can influence the extent to which adolescents manage psychological stress. These were the factors which came to play after a behaviour has been initiated. For example, individual, family or school factors, including lifestyles and support systems that could influence/prevent adolescents to psychological stress.

Figure 1: Diagram illustrating precede model

The model discussed above is conceptualised below:



Methods

A descriptive cross-sectional study was conducted in the month of June- July, 2019 among adolescents in Secondary Schools in Ibadan-North Local Government from JSS1- SS3. The sample size determination was done using a prevalence of 30.9% based on the study conducted by (Akanni and Orakpo, 2017), 5% level of significance and 10% non-response rate using the Leslie Kish formula for the estimated proportion. Therefore, the sample size was estimated to be 328. However, it was increased to 400 to address any possible case of incomplete response.

The eligible respondents were selected using a multistage sampling method. In the first stage, the schools in the local government area (LGA) were stratified into public and private schools (42 public schools and 54 government

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approved private schools) and the ratio of public schools to private schools was determined to be 2:3. In the second stage, proportional ratio was employed to randomly select 4 public and 6 private schools that were included in the study. The third and fourth stages included using a simple random sampling to select the classes and students from JSS1-SS3 in each of the schools.

A pre-tested semi-structured self-administered questionnaire was employed to collect data from four hundred respondents to assess their socio-demographic characteristics (like age, gender, sex etc.), knowledge, prevalence, coping mechanisms and associated factors (personal, school, family and romantic factors) of psychological stress. Pretesting of the questionnaire was done among in-school adolescents in a public and private secondary school in another local government with similar characteristics and the reliability test obtained was 0.937.

The General Health questionnaire (GHQ-12) was adapted to screen for the prevalence of psychological stress. This is a 12-item instrument designed to determine the prevalence of psychological stress among the respondents. This scale was developed by Goldberg and Williams which is a modified shorter version of GHQ-30 questionnaire (Gao, Stark, Bennett, Siegert, Murray and Higginson, 2012).

The Brief-COPE questionnaire was adapted to documents the coping mechanisms among the respondents (Garcia *et al.*, 2018). This is a 28-item self-report questionnaire designed to measure effective ways to cope with a stressful life event. This can be used to measure how someone is coping with a wide range of situations e.g., financial, family, school stress etc. It was designed to determine an individual's primary coping styles as either approach or avoidant coping mechanisms.

Ethical approval was obtained from the Oyo State Ministry of Health Research Committee with a reference code of AD 13/479/1379 and permission was taken from the principals in each of the schools recruited into the study. All the students were informed about the study before administering the questionnaire to them. Assent was obtained from the students before data collection and strict confidentiality was maintained throughout the data collection process.

Scoring and Interpretation of the questionnaires

GHQ-12

All items were rated on a 3 points scale; 1 (never), 2 (sometimes) and 3 (always). The criterion mean was determined using the average mean score for the Likert scale (Never-1, Sometimes-2 and always-3). The mean scores above 2.0 indicates a high level of prevalence towards psychological stress while mean scores below 2.0 shows a low level of prevalence of psychological stress among the in-school adolescents. The responses obtained from the questions measuring prevalence adopted from the General Health Questionnaire (GHQ12) were converted into mean scores. A three-point scale was used for this analysis. The three categories of Always, Sometimes and Never, were

assigned figures: 3, 2, 1 respectively. A total score was estimated for each respondent. The criterion mean score was determined by summing up the scores assigned to the degree of behaviour to a statement and dividing it by the number of possible responses to the statement as follows:

$$\frac{3+2+1}{4}=2$$

Brief-COPE

The Brief-COPE scale was rated on a 4 points scale: 1 (not at all), 2 (a little bit), 3 (a medium amount) and 4(a lot). The frequency of the highest score (a lot) for each question was recorded as the most common coping mechanisms employed among the respondents.

Knowledge

The 16 knowledge questions on psychological stress were summed up to determine the knowledge score. The score for knowledge of psychological stress was measured on a 16-point scale and scores ≤ 6 were categorized as poor, $>6 \leq 11$ as fair and $>11 \leq 16$ as good knowledge.

Data was analysed using SPSS version 23, employing descriptive and inferential statistics (Chi-square and Regression analysis) at $< 5\%$ level of significance.

Results

A total of 400 students were recruited into the study, out of which 47.3% were males and 52.5% were females. The mean age of respondents was 14.1 ± 1.64 years; majority of the respondents (85%) were within the age of 13-18 years. Many of the respondents (66.3%) were Christians and majority (81.3%) were from a monogamous family. More than a third of the students were in the second year of senior secondary school (SS2) (135, 33.8%). Other results are presented in Table 1:

Table 1a: Socio-demographic characteristics of the respondents (N=400)

Socio-demographic Variables	N (%)
Age group (years)	
10-12	60(15.0)
13-15	270(67.5)
16-18	70(17.5)
Gender	
Male	190(47.5)
Female	210(52.5)
Ethnicity	
Yoruba	344(86.0)
Igbo	35(8.8)
Hausa	11(2.8)
Others	10(2.5)
Educational level	
JSS 1	18(4.5)
JSS 2	29(7.3)
JSS 3	84(21)
SS1	106(26.5)
SS2	135(33.8)
SS3	28(7.0)
School type	
Public	162(40.5)
Private	238(59.5)
Religion	
Islam	128(32.0)
Christianity	264(66.6)
Traditional	3(0.8)
Father's occupation	
Artisan	26(6.5)
Professional	203(50.8)
Self-employed	170(42.5)
Unemployed	1(0.3)
Mother's occupation	
Artisan	11(2.8)
Professionals	170(42.5)
Self-employed	214(53.5)
Unemployed	5(1.3)
Family type	
Monogamy	325(81.3)
Polygamy	75(18.8)
Relationship with Father	
Close	356(86.6)
Not close	54(13.5)
Relationship with Mother	
Close	384(78.5)
Not close	16(4.0)
Relationship with Siblings	
Close	382(67.0)
Not close	18(4.6)

Awareness and knowledge of psychological stress

The awareness level of psychological stress was observed to be less than half (43.8%) among the in-school adolescents and majority of respondents had poor knowledge (77.5%) while others had fair (13.8%) and good knowledge (8.8%) of psychological stress. Only 13.5% of the respondents were able to correctly define psychological stress. The overall knowledge score obtained from the respondents was 2.98 ± 1.25 (Table 2).

Table 2a: Knowledge of psychological stress (N=400)

Knowledge Variables	Frequency	(%)
Definition of psychological stress		
The emotional response of the body to chronic stressful event	17	(4.25)
This occurs when you have difficulty coping with a situation	33	(8.25)
Factors that trigger the development of psychological stress		
Too much work in school	15	(3.75)
Being bullied in school	12	(3.00)
Lack of understanding by Parent	5	(1.25)
Recognized signs of psychological stress		
Poor performance in School	20	(5.0)
Love to be alone	50	(12.5)
Inadequate sleep	9	(2.25)
Symptoms of psychological stress		
Lack of energy	100	(25.0)
Inadequate sleep	56	(14.0)
Consequences associated with psychological stress		
Suicide	50	(12.5)
Eating disorders	21	(5.25)
Hypertension	30	(7.50)
The most common sign of psychological stress		
Sadness	129	(32.2)
How psychological stress can be managed		
Seek medical help	27	(6.75)
Solve the problem	15	(3.75)
Avoidance	15	(3.75)
Classified warning symptoms of psychological stress		
Cognitive	5	(1.25)
Physical	5	(1.25)
Behavioural	5	(1.25)
Emotional	30	(7.50)
Level of knowledge		
Poor knowledge	310	(77.5)
Fair knowledge	55	(13.8)
Good knowledge	35	(8.8)
Average knowledge score	2.98	±1.25

A mean score of 2.0 to 4.0 was considered high level of prevalence of psychological stress while mean scores below 2.0 indicated a low level of prevalence of psychological stress among the in-school adolescents. The analysis conducted with respect to the variables measuring prevalence of stress revealed a low prevalence of psychological stress among the in-school adolescents. The average mean score of 1.37 was gotten which is less than the estimated criterion means score of 2.0 ($\bar{x}=1.37 < 2.0$). Also, a mean score of 1.53 for the variable “I do not concentrate while studying”, mean score of 1.43 for the variable “I am not able to make decisions effectively”, mean score of 1.42 for the variable “I am unable to face problems” and the mean score of 1.41 for the variable “I feel unhappy” were observed to have means scores close to the criterion mean and can be referred to as the major variables measuring the level of prevalence of stress among the in-school adolescents. However, analysis conducted based on the responses given by each respondent revealed that majority (94%) had low prevalence of psychological stress while a few (6%) were observed to have tendency of being psychologically stressed. The details are presented in Table 3a and 3b.

Table 3a: Prevalence of psychological stress (N=400)

Variables	Total Responses			Total Weighted responses					
Analysis by Variables Measuring psychological stress									
During the last 30 days	Never	Sometimes	Always	Never (1)	Sometimes (2)	Always (3)	Total	Mean score	Description
I do not concentrate while studying	202	184	14	202	368	42	612	1.53	LP
I do not sleep because am worried	308	82	10	308	164	30	502	1.26	LP
I am not able to make decisions effectively	244	138	18	244	276	54	574	1.44	LP
I feel unhappy	250	137	13	250	274	39	563	1.41	LP
I feel depressed	282	100	18	282	200	54	536	1.34	LP
I have lost confidence in myself	290	97	13	290	194	39	523	1.31	LP
I am constantly under pressure	276	101	23	276	202	69	547	1.37	LP
I do not enjoy normal activities	267	111	22	267	222	66	555	1.39	LP
I am unable to face problems	260	114	26	260	228	78	566	1.42	LP
I often feel worthless	302	83	15	302	166	45	513	1.28	LP
I am unable to overcome difficulties	285	98	17	285	196	51	532	1.33	LP
I feel hopeless about life	286	82	32	286	164	96	527	1.37	LP

*LP-Low prevalence

Table 3b: Prevalence of psychological stress (N=400)

Analysis by Respondents	
Level of prevalence	N (%)
Low	375(93.8)
High	25(6.3)
Average Prevalence score	1.37±0.36

Coping mechanism for psychological stress

The various coping strategies employed by the respondents towards psychological stress were majorly divided into problem solving and emotion-focused coping mechanisms. Coping mechanisms identified among the respondents were: Instrumental support (38.8%) Humour (17.4%), Substance use (15.6%), Behavioural disengagement e.g., yelling (17.4%), Active coping (13.4%), Positive reinterpretation (36.6%), Emotional support (31.3%), positive reinterpretation (44.2%), self-blame (29.9%), planning (17.0%), denial of the problem (24.1%), acceptance (26.8%), Religion (12.9%) and self-distractions e.g., Going to the movies (49.1%). Going to the movies (49.1%), a self-distraction measure was observed to be the most frequently coping

mechanism employed for the emotion-focused/avoidant category while positive reinterpretation (interpreting a situation positively) (44.2%) was observed to be the most frequently coping mechanism employed for the problem-focused/approach coping category against psychological stress. However, results showed that the most common coping mechanism approach among the in-school adolescents was emotion-focused coping mechanism (avoidant approach). The various coping mechanisms employed towards psychological stress are presented in Table 4.

Table 4: Brief COPE questionnaire-coping mechanisms of psychological stress among the respondents (N=400)

Variables	A lot (%)
AVOIDANT COPING MECHANISMS	
Instrumental support	87(38.8%)
Humour	39(17.4%)
Substance abuse	35(15.6%)
Behavioural disengagement e.g., suicide	39(17.4%)
Self-blame	67(29.9%)
Denial	54(24.1%)
Venting of emotions e.g., yelling	45(20.1%)
Self-distraction measures	
i. Going to the movies	110(49.1%)
ii. Watching TV	54(24.1%)
iii. Imagining positive things	46(20.5%)
APPROACH COPING MECHANISMS	
Active coping	30(13.4%)
Seeking emotional support	70(31.3%)
Positive reinterpretation	99(44.2%)
Planning	38(17.0%)
Acceptance	60(26.8%)
Religion (praying and meditating)	88(39.3%)

Reference: Garcia *et al.*, 2018

Associated factors of psychological stress

The most common associated factors of psychological stress observed among the in-school adolescents were personal factors (competition motivates me (60.5%), I love to take my time while working (65.0%) and I am very loyal to my friends and family (66.8%). Other factors included family and school factors, peer pressure and romantic relationships. The details of the results are presented in Table 5a.

Table 5a: Associated factors of psychological stress among the respondents (N=400)

Variables	Frequency (n)	Percentage (%)
Personal factors		
I do not like my physical appearance	59	14.8
I feel inferior to others	88	21.8
Competition motivates me	242	60.5
I love to take my time while working	260	65.0
I see things from a negative point of view	155	38.8
I am very loyal to my friends and family	267	66.8
Family factors		
My parents do not understand me	120	30.0
I have too many responsibilities at home	99	24.8
My parents do not support me	68	17.0
My parents are expecting too much from me	103	25.8
My parents have disagreements all the time	66	16.5
School factors		
I find it difficult to keep up with schoolwork	69	17.3
I find it difficult to wake up early to go to School	103	25.8
My teacher expects too much from me	146	36.5
I have difficulty with some subjects	194	48.5
I have difficulty with abiding by the rules in School	88	22.0
I am not getting along with my teachers	77	19.3
Peer pressure		
I am being bullied by my classmates	84	21.0
I have pressure fitting in with peers	81	20.3
I always have disagreements with my peers	77	19.3
Romantic relationships		
I am being ignored by the one I like	95	23.8
I am not getting along with my boy/girlfriend	67	16.8
My boy/girl friend is cheating on me	54	13.5
I have been jilted by my boy/girlfriend	58	14.5

Further analysis was carried out with Chi-square and Fischer exact test to check the significantly associated factors with the prevalence of psychological stress. Findings revealed that: personal factors: I do not like my physical appearance (p-value: 0.02) and competition motivates me (p-value: 0.01) were significantly associated with the prevalence of psychological stress. However, the personal factor “competition motivates me” was negatively associated with the prevalence of psychological stress. Other factors significantly associated with the prevalence of psychological stress included Family factors [my parents do not understand me (p-value: 0.012), my parents have disagreements all the time (p-value: 0.047) and my parents cannot support me financially (p-value: 0.001)], School factors [I have difficulty with abiding by rules in school (p-value: 0.001) and I find it difficult getting up early to go to school (p-value: 0.006)], Peer pressure factors [being bullied by my friends (p-value:0.016) and pressure to fit in with peers (p-value:0.043)] and Romantic factors [not getting

along with my boy/girlfriend (p-value: 0.022) and got jilted by boy/girlfriend (p-value:0.003)] (Table 5b).

Table 5b: Factors significantly associated with psychological stress among in-school adolescents (N=400)

Variables	N (%)		Chi-square(p-value)	Cramer's V (p-value)
	Yes			
Physical factors				
I do not like my physical appearance				
Yes	51(12.8)	8(2.0)	6.31(0.019) *	0.126(0.012)
No	324(81.0)	17(4.3)		
Competition motivates me				
Yes	233(58.3)	9(2.3)	6.69(0.010)	-0.129(0.010)
No	142(35.5)	16(4.0)		
Family factors				
My parents do not understand me				
Yes	11(2.8)	14(3.5)	8.82(0.012)*	0.15(0.012)
No	269(67.3)	11(2.8)		
My Parents have disagreements all the time				
Yes	58(14.5)	8(2.0)	4.650(0.047) *	0.108(0.047)
No	317(79.3)	17(4.3)		
My parents cannot support me financially				
Yes	57(14.2)	11(2.8)	13.78(0.001) *	0.186(0.001)
No	318(79.5)	14(3.5)		
School factors				
I have difficulty with abiding by rules in school				
Yes	77(19.3)	11(2.8)	7.52(0.006)	0.137(0.006)
No	298(74.5)	14(3.5)		
I find it difficult getting up early to go to school				
Yes	90(96.6)	12(3.0)	9.61(0.002)	0.16(0.002)
No	285(71.3)	13(3.3)		
Peer pressure factors				
Being bullied by my friends				
Yes	74(18.5%)	10(2.5)	5.80(0.016)	0.12 (0.016)
No	301(75.3)	15(3.8)		
Pressure to fit in with peers				
Yes	72(18)	9(2.3)	4.09 (0.043)	0.1(0.043)
No	303(75.8)	16(4.0)		
Romantic relationship factors				
Not getting along with my boy/girl friend				
Yes	58(14.5)	9(2.3)	7.09(0.022) *	0.13(0.008)
No	317(79.3)	16(4.0)		
Got jilted by boy/girlfriend				
Yes	45(11.3)	9(2.3)	11.6(0.003) *	0.17(0.001)
No	330(88)	16(4.0)		

Fischer Exact test values are denoted with *

Further to this, binary logistic regression analysis was conducted to determine the predictors of psychological stress among the associated factors that were

significantly associated with the prevalence of psychological stress. Results showed that the factors “not supported by parents financially” (OR: 2.681, 95% CI 1.0-7.1) and “finding it difficult to keep up with school work” (OR: 0.202, 95% CI 0.04-0.8) were positively associated with the prevalence of psychological stress among the in-school adolescents. The details of the analysis are presented in Table 6.

Table 6: Predictors of psychological stress among the in-school adolescents (N=400)

Variables	Prevalence of psychological stress)	OR	OR(RC)	CI (95%)	p-value (regression)
	Yes N (%)				
Not supported by parents financially	66(29.46)	2.68 1	0.0027	1.011- 7.106	0.047
Finding it difficult to keep up with school work	67(29.91)	0.20 2		0.047- 0.868	0.032

Discussion

The study was a descriptive, cross sectional, school-based study conducted among in-school adolescents. The study aimed to assess the knowledge of psychological stress, determine its prevalence, identify the various coping mechanisms employed towards dealing with psychological stress and determine the significant associated factors of psychological stress among school going adolescents of 10-19 years group in Ibadan- North Local government, Ibadan. There were more females in this present study against what was reported according to (Famakinwa *et al.*, 2016) in a similar study. Majority of the students were the firstborns and from an average home as like the study on adolescent learners in India (Manikanda and Devi, 2015). More than half of the respondents stated that their parents’ highest form of education was tertiary which was contrary to the study conducted at Ido-Ekiti (Oderinde *et al.*, 2018). This might be because of the rate of industrialisation in Ibadan compared to Ido-Ekiti. The study showed that majority of the respondents stated that their parents were married and from a monogamous family and they have a close relationship with their parents and siblings which was similar to the study conducted in Ido-Ekiti (Oderinde *et al.*, 2018). This implies that other factors might have contributed to the prevalence of psychological stress among the respondents since majority reported that they have a cordial relationship with their parents and siblings.

The knowledge of psychological stress was very low among the in-school adolescents with majority of the respondents having poor knowledge of psychological stress most especially knowledge of the classified symptoms and coping mechanisms of psychological stress. This can be used to justify the

reason for the high rate of prevalence of psychological stress among the students. Also, a few were able to identify solving the problem, avoidance and seeking medical help as the various ways by which psychological stress could be managed. There is therefore a need for continuous enlightenment on psychological stress among adolescents by focusing on its signs, symptoms and its coping mechanisms.

The prevalence of psychological stress was observed to be low among the in-school adolescents with only a few observed to have high prevalence of psychological stress. This was comparable to the study carried out by Oderinde *et al.* (2018) and Omigbodun *et al.* (2008) but very low compared to the study by Nagendra *et al.* (2012) where the prevalence was determined to be 57.7%. This might be because of different instruments used and location in which the study was conducted.

The various sources of psychological stress identified among the respondents were divided into personal, family, school, peer-pressure and emotional factors. Among the personal factors, 14.7% of the respondents stated that they do not like their physical appearance. This was at variance with the study by Davila *et al.* (2009), which reported that most adolescents were concerned about their physical appearance and more common among girls than boys. About 22% of the adolescents in this study stated that they feel inferior to others, while 39% stated that they were driven by competition. Davila *et al.* (2009) highlighted that setting of unrealistic goals and excessive competition are factors that could result in psychological stress among students.

In addition, less than a third of adolescents reported having too much expectation from parents and parents always have disagreements all the time. Davila *et al.* (2009) identified stressors to include families placing a great deal of stress on students by telling them that they need to acquire good grades, lack of parent-child communication, poverty, arguments/divorce between parents and shallow understanding of each other's expectations. School factors influencing psychological stress identified among the respondents were having difficulty with some subjects, not getting along with teachers, too much expectations from them and finding it difficult to keep up with schoolwork and abiding by school rules. These findings were comparable with the findings from Simuforosa (2013) that stated that the various school stressors are: too much homework, unsatisfactory academic performance, preparation for test/examination, lack of interest in a particular subject. The pressure to perform well and to exceed the expectations of parents and teachers could place a great deal of psychological stress on adolescents. The various factors identified from this study were significantly associated with the prevalence of psychological stress. This was contrary to the findings from Akanni and Otakpor (2016) that only school factors were mostly associated with the prevalence of psychological stress. There were significant associations between family related variables and the prevalence of psychological stress which was similar to results of study Akanni and Otakpor (2016).

The findings from this study highlighted that the most common coping strategy employed by adolescents against stress was distraction which included going to the movies and watching television. However, the results obtained by Zimmer-Gimbeck and Skinner (2011) reported that majority of adolescents prefer to use problem solving approach such as seeking support to deal with stressors. This was contrary to this study finding that majority of the respondents preferred to employ the emotion focused strategy in dealing with stressors that are faced daily.

Conclusion

There was low awareness psychological stress which could have explained the low knowledge among the in-school adolescents. Though respondents were able to identify the various signs and symptoms of psychological stress, the knowledge of the positive ways of coping with psychological stress was low. This highlights inadequate knowledge, which could translate to inadequate skills/resilience in managing psychological stress. Mental health can be promoted or sustained when proper measures are taken to prevent the prevalence of psychological stress among in-school adolescents. Therefore, mental health promotion and education should be included into the school curriculum to enlighten adolescents on issues relating to psychological stress and its coping strategies.

Recommendations

- Continuous sensitisation must be done among students, teachers and parents by the various schools in the local government on the various associated factors that can influence the development of psychological stress and strategies should be adopted on ways to reduce the menace of psychological stress.
- Parents, teachers and counsellors should be trained on how to offer proper counselling services to adolescents in order to improve their mental health.
- Mental health education should be included into the school curriculum since the physical health of adolescents is directly linked with their mental health. This will help to boost the knowledge of adolescents on this topic thereby improving their coping strategies for psychological stress.
- The ministry of health in collaboration with the ministry of education should revive the various youth friendly centres located in Ibadan by employing people with young minds that can flow easily and effectively with teenagers by imbibing all counselling skills needed to improve the mental health of adolescents in Ibadan.
- Ministry of health should collaborate with the media to increase the awareness of people on psychological stress by providing instant services where people especially adolescents can access assistance. This can be

through radio jingles, broadcast messages, media posts and instant messages through SMS. This will help to increase the awareness of adolescents thereby improving the mental health of adolescents.

- It is also very necessary to include religious leaders in the campaign of psychological stress in their various churches and mosques since they could also serve as a major influence on adolescents.
- Stress management techniques should be integrated into the educational curriculum by the ministry of education to further create the consciousness of students towards stress management.

References

1. Akanni, O. O. & Otakpor, A. N. (2016). Psychological distress and resilience: A study of prevalence and association among school-attending adolescents in Benin-City. *Sri Lanka Journal of Psychiatry*, 7(1).
2. Clarke, A. T. (2006). Coping with interpersonal stress and psychosocial health among children and adolescents: A meta-analysis. *Journal of Youth and Adolescence*, 35(1), 10-23.
3. Depression: Let's talk WHO. (2019). Available at: http://www.who.int/mental_health/management/depression/en/. Assessed on 9th October, 2019.
4. Davila, J., Steinberg, S. J., Kachadourian, L., Cobb, R. & Fincham, F. (2004). Romantic involvement and depressive symptoms in early and late adolescence: The role of a preoccupied relational style. *Personal Relationships*, 11(2), 161-178.
5. Famakinwa, T. T., Olagunju, O. E. & Akinnawonu, C. I. (2016). A study of psychosocial challenges of public secondary school students in a semi-urban area of Southwest-Nigeria. *Journal of Community Medicine and Primary Health Care*, 28(1), 59-64.
6. Gao, W., Stark, D., Bennett, M. I., Siegert, R. J., Murray, S. & Higginson, I. J. (2012). Using the 12-item general health questionnaire to screen psychological distress from survivorship to end-of-life care: Dimensionality and item quality. *Psycho-Oncology*, 21(9), 954-961.
7. García, F. E., Barraza-Peña, C. G. & Wlodarczyk, A. (2018). Psychometric properties of the Brief-COPE for the evaluation of coping strategies in the Chilean population. *Psicol. Refl. Crít*, 31, 22. <https://doi.org/10.1186/s41155-018-0102-3>.
8. Green, L. & Kreuter, M. (1999). The precede-proceed model. *Health promotion planning: an educational approach*. 3rd ed. Mountain View (CA): Mayfield Publishing Company, 32-43.
9. Davila, J., Stroud, C. B., Starr, L. R., Miller, M. R., Yoneda, A. & Hershenberg, R. (2009). Romantic and sexual activities, parent-adolescent stress, and depressive symptoms among early adolescent girls. *Journal of adolescence*, 32(4), 909-924.

10. Jeanne, S., Melinda, S. M. A. & Lawrence, R. (2010). Fast and effective ways to rapidly reduce stress.
11. Kempf, J. (2011). *Recognizing and Managing Stress Coping Strategies for Adolescents*. Doctoral dissertation, University of Wisconsin—Stout, 250-260.
12. Manikandan, K. & Devi, S. N. (2015). A study on stress among adolescent learners. *Scholarly Research Journal for Interdisciplinary Studies*, 2(16), 2725-2730.
13. Mathew, C. P. (2017). Stress and coping strategies among college students. *IOSR Journal of Humanities and Social Science*, 22(8), 40-44.
14. Nagendra, K., Sangay, D., Gouli, C. and Kalappanavar, N. K. (2012). Prevalence and association of depression and suicidal tendencies among adolescent students in Davangere, India. *International Journal of Biomedical and Advance Research*, 3, 714-918.
15. Oderinde, K. O., Dada, M. U., Ogun, O. C., Awunor, N. S., Kundi, B. M., Ahmed, H. K., & Yusuff, A. A. (2018). Prevalence and predictors of depression among adolescents in Ido Ekiti, South west Nigeria. *International Journal of Clinical Medicine*, 9(3), 187-202.
16. Omigbodun, O., Dogra, N., Esan, O. & Adedokun, B. (2008). Prevalence and correlates of suicidal behaviour among adolescents in southwest Nigeria. *International journal of social psychiatry*, 54(1), 34-46.
17. Stoppler, M. C. and Dryden-Edwards, R. (2020). What causes stress? Stress management <https://www.medicinenet.com/stress/article.htm>. Downloaded online 21/07/2021.
18. Simuforosa, M. (2013). Stress and adolescent development. *Greener Journal of Educational Research*, 3(8), 373-380.
19. Prabu, P. S. (2015). A study on academic stress among higher secondary students. *International Journal of Humanities and Social Science Invention*, 4(10), 63-68.
20. Zimmer-Gembeck, M. J. & Skinner, E. A. (2011). The development of coping across childhood and adolescence: An integrative review and critique of research. *International Journal of Behavioral Development*, 35(1), 1-17.

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