

# Prevalence and Predictors of Bullying Victimization among in-School Adolescents in Sokoto Metropolis, North-Western Nigeria

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## ABSTRACT

**Introduction:** Bullying victimization is a common experience among adolescents. Victimization is associated with negative consequences including negative mental outcomes, poor academic results, and poor social relationships. We describe the various forms of bullying victimization and the predictors of victimization among in-school adolescents in Sokoto metropolis.

**Material and Methods:** We conducted a cross-sectional study among in-school adolescents in Sokoto metropolis. Using a multistage sampling technique, 450 respondents were selected from public and private schools. We used an adapted, validated, pretested and interviewer-administered peer victimization scale questionnaire to collect information from respondents. We conducted a descriptive statistic, bivariate and multivariate analysis at 5% level of significance.

**Results:** Of the 450 respondents, 182 (40.4%) were in early adolescence and 220 (48.9%) were females. The mean age of respondents was  $15.2 \pm 1.9$  years. Two hundred and thirty (51.1%), 102 (22.7%), 38 (8.4%), 161 (35.8) respondents had experienced physical, verbal, relational and damage-to-property victimization respectively. Overall, 295 (65.6%) had experienced at least one type of bullying victimization. Being in junior class (adjusted odds ratio (aOR): 2.1, 95% CI= 1.2-3.5) being in a boarding school (aOR: 3.4, 95% CI= 1.7-6.8), having friends that influence decisions (aOR: 2.5 (1.1-5.6), not smoking (aOR: 3.3, 95% CI = 1.1-10.0) and not knowing school policy on bullying (aOR: 2.1, 95% CI= 1.2-3.8) were independent predictors of bullying victimization.

**Conclusion:** There is a high prevalence of bullying victimization among in-school adolescents in Sokoto metropolis. We recommend that school policy should protect junior students and those in boarding schools from victimization.

**Keywords:** Bullying, Victimization, Adolescents, Sokoto

at significant risk of experiencing a wide spectrum of behavioural and psychosomatic symptoms.<sup>3</sup> They are also more likely to drop out of school and running away from home.<sup>4</sup> The consequences of bullying victimization extend into adulthood, as there is evidence of significant association between childhood bullying behaviour and later psychiatric morbidity.<sup>5</sup>

While bullying occurs globally, the majority of researches on bullying has come from industrialised countries.<sup>6</sup> Understanding the burden of bullying and other forms of violence among students in Africa and potential linkages with health problems is a challenge owing to inadequate data that allow these linkages. The few studies available indicate that the prevalence of bullying ranges between 18% and 63%<sup>7-11</sup> in Africa. In Nigeria, bullying victimization is a widespread problem in schools. Unfortunately, parents and teachers tend to regard it as part of childhood experience which Nigerian children must learn to tolerate as part of the process of growing up.<sup>12</sup> However, bullying has continued to be an important contributor to violence among adolescents in Nigeria.<sup>12</sup> In Nigeria, the prevalence of bullying ranges between 21% and 82%.<sup>13-21</sup>

Awareness of bullying and associated health problems has increased globally. However, studies describing the burden of bullying in Africa is limited.<sup>22</sup> This is the case in Nigeria where only a few studies<sup>16-21,23</sup> (mostly in the southern part of the country) have reported the prevalence, with none of these

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**How to cite this article:** Ismail Abdullateef Raji, Kabir Sabitu, Sulaiman Saidu Bashir, Bola Biliaminu Lawal, Aminu Umar Kaoje, Mansur Olayinka Raji, Auwal Abubakar Usman. Prevalence and predictors of bullying victimization among in-school adolescents in Sokoto Metropolis, North-Western Nigeria. International Journal of Contemporary Medical Research 2019;6(9):11-18.

**DOI:** <http://dx.doi.org/10.21276/ijcmr.2019.6.9.25>

## INTRODUCTION

While a certain amount of conflict and harassment is typical of adolescent peer relations, bullying presents a potentially more serious threat to healthy adolescent development.<sup>1</sup> It has risen to become one of the most important forms of interpersonal violence among adolescents worldwide.<sup>2</sup> Adolescence is a period of changes and challenges especially concerning control over behaviour, psychological orientation, and social interaction. Adolescents may therefore be especially susceptible to the health effects of negative social interactions such as bullying.<sup>1</sup> Exposure to bullying at this stage of life course may influence health through a variety of pathways. Victims of bullying are

carried out in the Northern part of the country. Sociocultural factors are significantly associated with bullying,<sup>24</sup> therefore, giving the sociocultural differences between the northern and southern parts of the country, there is a need to explore the picture in the north. Therefore, we assessed the prevalence, pattern, and predictors of bullying victimization among in-school adolescents in Sokoto metropolis.

## MATERIAL AND METHODS

Sokoto metropolis has four LGAs: Sokoto South, Sokoto North, Dange Shuni and Wamakko. The inhabitants are mainly Hausa and Fulani ethnic groups. It is made up of a predominantly Muslim population. The State Government undertakes the provision of secondary education to all eligible children in the state. Sokoto State has three fundamentally distinct educational systems: the indigenous system, Quranic schools, and formal European-style education institutions. The formal system prescribes enrolment in primary school at the age of six years and stipulates a 9-3-4 structure offering nine years of basic education (six years of primary, three years of junior secondary), three years of senior secondary and four years of higher education provided by a mixture of public and private schools. Most of the public and private schools have a mix of boys and girls while some are boys only or girls only secondary schools.

This study employed a cross-sectional study design that was conducted among adolescents 10-19 years old in secondary schools in the Sokoto metropolis. The minimum sample size of 450 was calculated using a  $z = 1.96$ ,  $p = 0.497^{21}$  and  $d = 0.05$ . A multistage sampling technique was used to select respondents from schools. In the first stage, a simple random sampling technique (balloting) was used to select 2 LGAs (Wamako and Sokoto South) from the 4 metropolitan LGAs. In the second stage, a line list of all schools in the selected LGAs was obtained from the Ministry of Education. The schools were then stratified into public and private. Two private schools and 3 public schools were selected using simple random sampling by balloting from each selected LGA (giving a total of 10 schools selected for the study). In the final stage, 45 students were selected from each school using simple random sampling (table of random numbers) while ensuring that each level in the school was equally represented.

Ethical approval for this study was obtained from Sokoto State Ministry of Health ethics committee. Permission for the study was obtained from Sokoto State Ministry of Education as well as from each school's principals. Ethical clearance was also obtained from Sokoto State Ministry of Health Ethics Committee. Consent was obtained from students above 18 years, and assent was obtained for all those below 18 years along with their parents' consent.

A structured interviewer-administered questionnaire was used for data collection. The questionnaire consisted of questions in different segments that were adapted and modified from different validated questionnaires.<sup>16,25-27</sup> The research instrument was pre-tested among 42 purposively sampled in-school adolescents (10% of sample size) in

three randomly selected schools in one LGA (Dange Shuni) not selected for the study. Internal consistency assessed using Cronbach's  $\alpha$  were 0.704, 0.769, 0.773 and 0.644 for physical, verbal, social bullying and attack on property respectively.

## STATISTICAL ANALYSIS

The experience of bullying victimization was assessed using questions adapted from the Multidimensional Peer-Victimization scale.<sup>26</sup> The scale was made of subscales addressing physical victimization, verbal victimization, social manipulation and attack on property. Point values were assigned to questions as follows: *yes* = 1, *no* = 0. All analysis was done using IBM SPSS version 21 and Microsoft excel version 2016 was used to draw the chart. To determine the prevalence of bullying behaviour, any respondent that has experienced at least one of the questions assessing various aspects was classified as having experienced that form of bullying. Proportions of the various forms of bullying victimization, socio-demographics and variables relating to family factors, peer factors, social factors, physical health, mental health, and school environment were reported. Chi-square test of independence was used to assess the relationship between socio-demographic characteristics and bullying victimization. Effect sizes for bivariate analyses were assessed using odds ratio and Cramer's

Variables	Frequency	Percent (%)
Age group (Years)		
10-14 years	182	40.4
15-19 years	268	59.6
Sex		
Female	220	48.9
Male	230	51.1
Religion		
Christian	117	26.0
Muslim	333	74.0
Ethnic group		
Hausa/Fulani	262	58.2
Yoruba	122	27.1
Ibo	65	14.4
Others	1	0.3
Parents marital status		
Married	450	100.0
Family type		
Polygamous	288	64.0
Monogamous	162	36.0
School type		
Public	279	62.0
Private	171	38.0
Class		
Junior class	172	38.2
Senior class	278	61.8
Kind of school		
Boarding	190	42.2
Day	260	57.8

**Table-1:** Sociodemographic characteristics of respondents (n=450)

V. Binary logistic regression model was used to identify factors that predict bullying victimization. The maximum margin for error in all analysis was set at 5% level of significance.

## RESULTS

The mean age of the respondents was  $15.16 \pm 1.9$  years with less than half of them (40.4%) in the age group 10-14 years. About half (51.1%) were males and a majority (64.0%) were from a polygamous setting. Sixty-two percent were in public school and 61.8% were in the senior class. More than half (57.8%) were in day school (Table 1).

About half of the respondents (51.1%) have experienced physical victimization while 38 (8.4%) have experienced relational bullying. Overall, 295 (65.6%) have experienced at least one form of bullying victimization (Figure 1).

A greater proportion of respondents in the age group 10-14 years (70.3%) had suffered one form of bullying or the other as compared to age group 15-19 years (62.3%). However, this difference was not statistically significant ( $p=0.079$ ). Similarly, those that suffered bullying were similar to those that didn't in terms of their religion ( $p=0.06$ ) and ethnicity ( $p=0.091$ ). Males were more likely to have suffered bullying

as compared to females ( $p=0.009$ ). Similarly, those from the monogamous setting ( $p=0.008$ ), public schools ( $p<0.001$ ), junior class ( $p=0.004$ ) and boarding school ( $p<0.001$ ) were more likely to have suffered bullying. (Table 2) Those who often experience parental quarrels or fight ( $p<0.001$ ), whose parents monitor their whereabouts ( $p = 0.009$ ), who are not accepted by classmates ( $p = 0.008$ ) were more likely to be victims of bullying. (Table 3) Cigarette smoking ( $p = 0.001$ ), feelings about safety within school environment ( $p = 0.009$ ), enjoy being together with peers ( $p = 0.015$ ), accepted by classmates ( $p = 0.012$ ) were significantly associated with victimization. (Table 4)

Following a binary logistic regression of factors associated with bullying, those in junior classes (aOR 2.1, 95% CI = 1.2 – 3.5), in boarding school (aOR 3.4, 95% CI = 1.7 – 6.8), who experience frequent parental conflicts (aOR 0.3, 95% CI = 0.2-0.9), whose friends do not have influence in their decisions (aOR 2.5, 95% CI = 1.6-5.6), who do not smoke (aOR 3.3, 95% CI = 1.1-10.0), and those who are not aware of a school policy on bullying (aOR 2.1, 95% CI = 1.2 – 3.8) were more likely to be victims of bullying. (Table 5)

Variables	Victim		Test statistics p value	POR (95% CI)
	No	Yes		
Age group (Years)				
10-14	54 (29.7)	128 (70.3)	$\chi^2 = 3.085$ $p = 0.08$	0.7 (0.5 - 1.0)
15-19	101 (33.7)	167 (62.3)		
Gender				
Female	89 (40.5)	131 (59.5)	$\chi^2 = 6.886$ $p = 0.009$	1.7 (1.1 - 2.5)
Male	66 (28.7)	164 (71.3)		
Religion				
Christian	32 (27.4)	85 (72.6)	$\chi^2 = 3.524$ $p = 0.06$	0.6 (0.4 - 1.0)
Muslim	123 (36.9)	210 (63.1)		
Ethnic group				
Hausa/Fulani	102 (38.1)	160 (61.1)	Fisher's exact $p = 0.09$	0.115 <sup>a</sup>
Yoruba	35 (28.7)	87 (71.3)		
Ibo	18 (27.7)	47 (72.3)		
Others	0 (0.0)	1 (100)		
Parental marital status				
Married	155 (34.4)	295 (65.6)	-	-
Family type				
Polygamous	112 (38.9)	176 (61.1)	$\chi^2 = 6.998$ $p = 0.008$	1.8 (1.2 - 2.7)
Monogamous	43 (26.5)	119 (73.5)		
Public/Private				
Public	77 (27.6)	202 (72.4)	$\chi^2 = 15.239$ $p < 0.001$	0.5 (0.3 - 0.7)
Private	78 (45.6)	93 (54.4)		
Class				
Junior class	45 (26.2)	127 (73.8)	$\chi^2 = 8.457$ $p = 0.004$	0.5 (0.4 - 0.8)
Senior class	110 (39.6)	168 (60.4)		
Kind school				
Day	124 (47.7)	136 (52.3)	$\chi^2 = 47.862$ $p < 0.001$	4.7 (2.9 - 7.4)
Boarding	31 (16.3)	159 (83.7)		
POR = Prevalence Odds Ratio CI = Confidence Interval a = Cramer's V				
<b>Table-2:</b> Relationship between overall victimization and sociodemographic characteristics (n=450)				

Variables	Victim		Test statistics p value	POR (95% CI)
	No	Yes		
Often experience parents quarrel or fight				
No	137 (41.3)	195 (58.7)	$\chi^2 = 26.085$ <b>p &lt; 0.001</b>	3.9 (2.3 - 6.7)
Yes	18 (15.3)	100 (84.7)		
Parent monitor whereabouts and friends				
No	7 (77.8)	2 (22.2)	Fisher's Exact <b>p = 0.009</b>	6.9 (1.4 - 33.8)
Yes	148 (33.6)	293 (66.4)		
Parents/guardian help as much as needed				
No	3 (33.3)	6 (66.7)	Fisher's Exact p = 1.000	1.0 (0.2 - 3.9)
Yes	152 (34.5)	289 (65.5)		
Enjoy being together with your peers				
No	6 (16.2)	31 (83.8)	$\chi^2 = 5.932$ <b>p = 0.02</b>	0.3 (0.1 - 0.8)
Yes	149 (36.1)	264 (63.9)		
Friends have influence in decisions				
No	11 (12.8)	75 (87.2)	$\chi^2 = 22.077$ p < 0.001	0.2 (0.1 - 0.4)
Yes	144 (39.6)	220 (60.4)		
Have a good relationship with peers				
No	3 (11.1)	24 (88.9)	$\chi^2 = 6.926$ <b>p = 0.008</b>	0.2 (0.1 - 0.8)
Yes	152 (35.9)	271 (64.1)		
Accepted by classmates				
No	4 (13.3)	26 (86.7)	$\chi^2 = 6.344$ <b>p = 0.01</b>	0.3 (0.1 - 0.8)
Yes	151 (36.0)	269 (64.0)		
Often feel left out of things				
No	45 (30.6)	102 (69.4)	$\chi^2 = 1.420$ p = 0.23	0.8 (0.5 - 1.2)
Yes	110 (36.3)	193 (63.7)		
Have more than 3 close friends in school				
No	5 (26.3)	14 (73.7)	$\chi^2 = .580$ p = 0.45	0.7 (0.2 - 1.9)
Yes	150 (34.8)	281 (65.2)		

POR = Prevalence Odds Ratio CI = Confidence Interval

**Table-3:** Relationship between overall bullying victimization and relationship factors among in-school adolescents (n=450)

Variables	Victim		Test statistics p value	POR (95% CI)
	No	Yes		
Smoke cigarette or other substances				
No	148 (37.2)	250 (62.8)	$\chi^2 = 11.464$ <b>p = 0.001</b>	3.8 (1.7 - 8.7)
Yes	7 (13.5)	45 (86.5)		
Consume alcohol				
No	155 (34.9)	289 (65.1)	Fisher's Exact p = 0.098	
Yes	0 (0)	6 (100)		
Feels safe within school environment				
No	10 (10.0)	90 (90.0)	$\chi^2 = 34.023$ <b>p &lt; 0.001</b>	0.2 (0.1 - 0.3)
Yes	145 (41.4)	205 (58.6)		
Presence of at least one teacher you talk to if you have a problem				
No	5 (17.9)	23 (82.1)	$\chi^2 = 3.638$ p = 0.06	0.4 (0.1 - 1.1)
Yes	150 (35.5)	272 (64.5)		
knows about school policy on bullying				
No	25 (18.5)	110 (81.5)	$\chi^2 = 21.663$ <b>p &lt; 0.001</b>	0.3 (0.2 - 0.5)
Yes	130 (41.3)	185 (58.7)		

POR = Prevalence Odds Ratio CI = Confidence Interval

**Table-4:** Relationship between overall bullying victimization and other factors among in-school adolescents (n=450)

## DISCUSSION

Bullying victimization among adolescents is a serious public health problem that can have a long-lasting effect even after the adolescent period.<sup>16</sup> The high proportion of in-school adolescents in Sokoto metropolis is a source of concern

especially considering the avalanche of other educational challenges in Nigeria. This high prevalence will only serve to add fears to the mix of problems students have to surmount to achieve a basic education, especially in the northern part of the country where less than half of the population are



Variables	aOR	95% CI for aOR		p value
		Lower	Upper	
Gender (Female vs Male <sup>a</sup> )	0.9	0.6	1.5	0.78
Family type (Polygamous vs Monogamous <sup>a</sup> )	0.7	0.4	1.2	0.19
Type of school (Public vs Private <sup>a</sup> )	0.6	0.3	1.1	0.11
Class (Junior vs Senior <sup>a</sup> )	2.1	1.3	3.5	0.003
Boarding/Days school (Boarding vs Day <sup>a</sup> )	3.4	1.7	6.8	0.001
Experience parents quarrel often (No vs Yes <sup>a</sup> )	0.3	0.2	0.6	0.001
Parents monitor where about and friends (No vs Yes <sup>a</sup> )	0.1	0.0	1.1	0.06
Enjoy being together with peers (No vs Yes <sup>a</sup> )	1.0	0.3	3.3	0.97
Friends have influence in decision (No vs Yes <sup>a</sup> )	2.5	1.1	5.6	0.03
Have a good relationship with your peers (No vs Yes <sup>a</sup> )	1.6	0.4	7.0	0.53
Classmates accept you for who you are (No vs Yes <sup>a</sup> )	2.0	0.6	6.8	0.27
Smoke (Yes vs No <sup>a</sup> )	3.3	1.1	10.0	0.03
Feel safe in school (No vs Yes <sup>a</sup> )	1.5	0.7	3.4	0.31
Knows about school policy on bullying (No vs Yes <sup>a</sup> )	2.1	1.2	3.8	0.01

<sup>a</sup> = Reference group aOR = adjusted Odds ratio CI = Confidence Interval

**Table-5:** Predictors of bullying victimization among in-school adolescents

educated.<sup>28</sup> Similar proportions have been reported in south-western part of Nigeria (Ogun, Osun and Ondo States).<sup>15,18,21</sup> However, the finding in this study is lower than what was reported in similar studies in Ile-Ife (88.1%) Benin city (80%) and Port Harcourt (82.2%).<sup>13,14,23</sup> The finding in this study was higher than what was obtained in other African countries where victimizations ranged between 25% to 63%.<sup>7,9,22</sup> The differences in the proportion could be as a result of cultural differences and what researchers have defined as bullying. For example, the study in Malawi used criteria of having been bullied within the last one month,<sup>7</sup> while we used criteria of ever bullied in this study. Also, different school policies and the adolescents' perception of bullying could be responsible for differences in proportions observed. Furthermore, studies among American adolescents found only 8.4-12% to be bully victims<sup>1,29,30</sup> and in Canada 7.6%.<sup>31</sup> This differences in proportion could be as a result of positive steps taken by advanced countries to fight the menace of bullying in schools. In Africa, bullying victimization is not seen as something wrong. At times, bullying is believed to be a phase in life of every student, especially those attending boarding schools which they must pass through.<sup>12</sup> This is evident in this study as those in boarding schools were almost 5 times more likely to be victims of bullying compared to those attending day schools.

The commonest form of bullying victimization is physical victimization (51.1%), followed by damage to property (35.8%). This is a source of worry as physical victimization could lead to physical injuries that could result in permanent deformity and damage to vital organs like the eye which can have long term consequences on the academic and social life of individuals affected. The finding in this study is similar to studies reported in Nigeria and America.<sup>15,18,32-34</sup> Urgent action has to be taken to curb the menace of physical bullying in schools. Some other studies in Nigeria (83.7% and 62% in public and private schools respectively)<sup>35</sup> and America (41%) have reported verbal bullying to be the commonest form of victimization among in-school adolescents.<sup>25</sup> Verbal bullying

could be commoner in some places because most school's laws outrightly prohibit physical bullying.<sup>36</sup> Verbal bullying is much less noticeable as the impact is mostly emotional leading to low-self-esteem and in severe cases depression.<sup>37</sup> In this study, a higher proportion of males (55.6%) compared to females (44.4%) were victims. This finding is similar to what was reported in previous studies in Nigeria and other countries.<sup>14,18,21,31,38</sup> However some studies in Europe and America have found that females were more victims than males.<sup>29,39</sup> This could be due to higher prevalence of cyberbullying and relational bullying among females.<sup>40,41</sup> In this study, there was a significant association between bullying and parental conflict as those who experience their parents' fight or quarrel often are more likely to be victims. A similar finding was reported in Zimbabwe, Cyprus and Australia, Filipinos Italy that poor family functioning was associated with increased bullying.<sup>42-46</sup> Although all the studies including ours were cross-sectional in design, the temporality of the association cannot be ascertained. However, the consistent findings could be an indication that there is a link between parental conflict in the home and violent outcomes for adolescents in schools. Parental monitoring of whereabouts and kinds of friends an adolescent moves with was not a significant factor in predicting bullying victimization. However, this was not the case in south-western Nigeria where parental monitoring was significantly associated with bullying.<sup>20</sup> studies in Cyprus and Australia found a negative correlation between parental monitoring and bullying.<sup>42,43</sup> In other studies, parental monitoring was positively associated with fewer bullying among adolescents.<sup>25,47,48</sup> The variations in association could be as a result of differences in parenting style in different cultures because studies have shown that parenting styles in which parents lend a listening ear to the child's problems at school are negatively associated with bullying behaviour<sup>42,49</sup> and parents that use authoritarian, harsh and punitive child-rearing practices are more likely to bully other children. Conversely, another study has shown that parents who are

overprotective are likely to have adolescents who are victims of bullying.<sup>50</sup> These findings indicate that striking a balance in parenting is essential in preventing bullying behaviour. Respondents whose friends do not influence their decisions are more likely to be victims. Similar finding has been reported in south western Nigeria.<sup>20</sup> The possible explanation for this is that those who have friends that influence their decision can easily be pushed into conditions or situations that expose them to bullies.

School factors such as feeling safe in school, and the presence of at least one teacher or other adults in the school that one could talk to in problem situations did not predict bullying victimization, however, a previous study showed that schools in which school teachers are supportive are less likely to have students exhibiting bullying behaviour.<sup>51</sup>

In this study, those who knew about school policy on bullying were less likely to be victims of bullying. The likely explanation for this is that they could be able to threaten their bullies with reporting to school authorities since they are well informed.

Those who do not smoke were more likely to be victims of bullying. Possible reason could be that those who smoke are likely to be part of a clique that is protecting them from being bullied. Contrary findings were reported in Malawi where those who smoke were 3 times more likely to be victims of bullying<sup>7</sup> and in Canada, no association was established between smoking or the use of harmful substances and bullying victimization.<sup>31</sup>

Consumption of alcohol was not associated with any of the bullying behaviour. This finding was not surprising due to cultural and religious predisposing of the study area where 74% of the respondent are Muslims. However, different studies in Africa, Europe and America have shown a different pattern of relationship between bullying behaviour and alcohol consumption.<sup>1,7,9,2,31</sup> Therefore, during intervention programmes to control bullying in schools, this could be considered as a factor that predisposes to bullying behaviour.

#### Limitations of the study

Victimization was assessed through the participant's self-reports. Relying on self-report data bears the risk of information bias. To limit this, respondents were assured of anonymity before data collection and reassurances about the confidentiality of information gotten.

### CONCLUSION

This study showed that the prevalence of bullying victimization is high among in-school adolescents and the predictors of bullying victimization include being in junior class, boarding school, having friends that influence decisions and not smoking. Bullying reduction programs organized by schools in collaboration with Parents and Teachers Association should focus attention on adolescents in junior class and boarding schools as they are more likely to be involved in bullying.

### ACKNOWLEDGEMENT

We would like to acknowledge the Nigerian Field

Epidemiology and Laboratory Training Program (NFELTP) and Africa Field Epidemiology Network (AFENET) for their financial and technical support in the execution of this study. We would also like to thank the Sokoto state Ministry of Education for permitting us to carry out this study.

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**Source of Support:** Nil; **Conflict of Interest:** None

**Submitted:** 18-08-2019; **Accepted:** 30-08-2019; **Published:** 23-09-2019