

Original Research

Suicidality in a Non-Clinical Sample of Nigerian Adolescents: Prevalence and Correlates

Opakunle Tolulope^{1,✉}, Aloba Olutayo², Suleiman Babatunde³, Akinsulore Adesanmi²

¹ State Specialist Hospital, Osogbo, Osun State, Nigeria

²Obafemi Awolowo University Teaching Hospitals Complex Ile-Ife, Osun State, Nigeria

³Ladoke Akintola University of Technology Teaching Hospital, Ogbomoso, Oyo State, Nigeria

Submitted to SOL: April 15th, 2018; accepted: April 1st, 2019; published: May 12th, 2019

Abstract: Adolescents have one of the highest rates of suicidal behaviours found in research. Hence, health research and interventions have become a key preference among them. The aims of this study were to determine the prevalence, correlates and predictors of suicidality among Nigerian adolescents. A multistage stratified sampling was used in this cross-sectional study to recruit 1015 high school adolescents. They completed a sociodemographic questionnaire, Suicidal Behaviours Questionnaire – Revised (SBQ-R), Hospital Anxiety and Depression Scale (HADS), General Health Questionnaire – 12 (GHQ-12) and Rosenberg’s Self-Esteem Scale (RSES). The lifetime prevalence rates of suicidal ideation and attempt were 9% and 3% respectively, while the prevalence of suicidal ideation over the past 12 months was 12%. In addition, 10.2% constituted the suicide high risk group, and 10.1% of the respondents had the likelihood of suicidality in the future. Depression has the highest significant association with suicidal behaviours. Suicidality is relatively high among Nigerian adolescents, and it is associated with depression, anxiety, psychological distress and low self esteem.

Keywords: Nigerian adolescents, suicidality, prevalence, correlates

Copyrights belong to the Author(s). Suicidology Online (SOL) is a peer-reviewed open-access journal publishing under the Creative Commons Licence 3.0.

According to the World Health Organization (WHO), Sub-Saharan Africa will have more adolescents than any other region by the year 2050 (Preparations & Organization, 2014). Hence, adolescent health research and interventions have become a key preference in Africa (Preparations & Organization, 2014). As reported in research, African adolescents have one of the highest rates of suicidal ideation and attempts (Omigbodun, Dogra, Esan, & Adedokun, 2008; Page, Saumweber, Hall, Crookston, & West, 2013). Nevertheless, despite

this disturbing statistics, there is still dearth of research on suicidality (ideation, plan and attempts) in Africa (Asante, Kugbey, Osafo, Quarshie, & Sarfo, 2017; Randall, Doku, Wilson, & Peltzer, 2014), and also in Nigeria (Omigbodun, Dogra, Esan, & Adedokun, 2008).

Suicide is a leading cause of death and is currently perceived as a major public health importance among adolescents worldwide (Kutcher & Szumilas, 2008; Patton et al., 2009). The prevalence of adolescent suicidality ranges from 4% to 31.9% across different countries and continents (Eaton et al., 2012; Palmier, 2011; Randall, et al., 2014). The prevalence rates of 11.2% to 31.9% in Low and Middle income countries (LMICs) are higher than the reported rates of 4.4% to 8.2% in High income countries (HICs) including Canada and United

✉ Opakunle Tolulope, MBBS, FMCPsych, State Specialist Hospital, Osogbo, Osun State, Nigeria, Email: tolu614@yahoo.com

States of America (Ahmad, Cheong, Ibrahim, & Rosman, 2014; Asante, et al., 2017; Eaton, et al., 2012; Omigbodun, et al., 2008; Palmier, 2011; Randall, et al., 2014). In Africa, the average overall prevalence of suicidal ideation was 19.8% in a study conducted across 49 countries excluding Nigeria. This high prevalence could be attributed to the biopsychosocial challenges among adolescents (Glozah & Pevalin, 2016). These include engagement in risky behaviours especially substance use and self harm which in turn, sadly increase their vulnerability to poor physical and mental health outcomes (Glozah & Pevalin, 2016; Preparations & Organization, 2014).

The different associated factors in suicidality among adolescents include gender differences, psychological factors, poor relationships, disrupted family structure, polygamy, poor academic work and socioeconomic factors (Arat & Wong, 2016; Mckenzie, Serfaty, & Crawford, 2003; Omigbodun, et al., 2008). Female teenagers are generally much more likely than males to experience suicidal ideation, while males complete suicide more than females (McMahon et al., 2014). Mental disorders especially depression predict suicidality in adolescents (Segun-Martins, 2013). In addition, a study reported that those adolescents who follow through more readily with suicide are those with feelings of anxiety (Asante, et al., 2017).

Only a few data are available in Africa, especially in Nigeria (Omigbodun, et al., 2008). This may be due to poor surveillance and socio-cultural factors surrounding suicide and its related stigma (Randall, et al., 2014). Moreso that suicide attempt is not viewed as a mental health issue, but, as a criminal offence which further obscures its reporting (Knizek, Kinyanda, Owens, & Hjelmeland, 2011; Osafo, Hjelmeland, Akotia, & Knizek, 2011). In Nigeria, there is no available data detailing the number of adolescent suicidal behaviours and death (Asante, et al., 2017). However, a Nigerian study reported a prevalence rate of 20% for suicidal ideation and 12% for suicide attempts among adolescents (Omigbodun, et al., 2008). Conversely, this study was reported about a decade ago and the authors did not explicitly report the contributions of anxiety, depression and psychological distress to Nigerian adolescent suicidal behaviours.

Therefore, our aims in this study were to determine the prevalence, correlates and predictors of suicidality (suicidal ideation, attempt and risk) among Nigerian adolescents. The findings in this study may positively contribute to the planning of mental health services and interventions among Nigerian adolescents.

Method

Participants

The study population consists of adolescents in all the 4 public high schools in Osogbo, an urban city in Southwestern Nigeria. They are from different ethnic groups. The medium of expression is English language in all the schools in Southwestern Nigeria. A multistage stratified sampling technique was adopted in this study. In the first stage, 3 classes were randomly chosen from each of the 3 levels of senior secondary classes in each of the high schools. This makes a total of 9 classes per school and 36 classes in total. The second stage involved the selection of 30 students per class by balloting. This yielded a total sample of 1080 students which represents about 10% of the total population of the high school students. They were recruited from September to December, 2017.

Procedure

The approval for the study protocol was obtained from the Research and Ethics Committee of the Ladoke Akintola University of Technology Teaching Hospital (LTH), Osogbo, Osun state. Permission was also obtained from the heads of the selected schools. The inclusion criteria were adolescent students within the age range of 13 – 19 years, those who gave assent to participate in the study and those with parental consent for the study participation. The students were given a form to give their parents explaining the study in terms of its nature and purpose. The parents gave or refused consent by indicating it on the form. We excluded those who indicated that they were receiving treatment for psychiatric or medical disorders.

Measures

Sociodemographic questionnaire

This questionnaire consisted of variables such as age, gender, religion and the family types.

Suicidal Behaviours Questionnaire-Revised (SBQ-R)
The SBQ-R consists of 4 items (Osman et al., 2001). Item 1 taps into lifetime suicide ideation and/or attempt while item 2 assesses the frequency of suicidal ideation over the past 12 months. In addition, item 3 assesses the threat of suicide attempt and item 4 evaluates self-reported likelihood of suicidal behaviour in the future (Osman, et al., 2001). The aggregate score on the SBQ-R ranges from 3 to 18, with higher scores reflecting greater risk for suicidal behaviours (Osman, et al., 2001). The psychometric properties of the SBQ-R in terms of its reliability, validity and screening characteristics have been described among Nigerian adolescents and young adults

(Aloba, Ojeleye, & Aloba, 2017). In the Nigerian study that reported the psychometric properties of SBQ-R, a cut off score of 8 indicates high suicide risk while a score less than 8 suggests low suicide risk among Nigerian adolescents and young adults (Aloba, et al., 2017).

Hospital Anxiety and Depression Scale (HADS)

This is a 14-item scale with 2 subscales; the anxiety and the depression subscales. Each scale is composed of 7 items (Zigmond & Snaith, 1983). Each item is scored on a 4-point Likert scale (0–3). The total score on each subscale ranges from 0 to 21. Higher scores on the subscales reflect higher anxiety and depressive symptoms. Satisfactory reliability and validity of the HADS as a screening instrument for anxiety and depressive disorder has been described within samples of the non-clinical and clinical populations in Nigeria (Abiodun, 1994).

General Health Questionnaire-12 (GHQ-12)

The GHQ-12 is a 12-item self-rated questionnaire that is used in the quick assessment of general psychopathology (Goldberg, 1978). The questionnaire has been validated in Nigeria (Gureje, 1991). We adopted the 0-0-1-1 scoring approach (Gureje, 1991). Total score on the questionnaire ranged from 0 to 12, with higher scores reflecting greater psychological distress and the likelihood of screening positive for a psychiatric disorder (Goldberg, 1978). A cut-off score of 3 and above is indicative of probable psychiatric morbidity.

Rosenberg's Self-Esteem Scale (RSES)

This is a 10-item questionnaire with items scored on a 4-point Likert scale from strongly agree to strongly disagree. Five of the scale's items are reversed scored. Higher scores on the scale reflect higher levels of self-esteem (Rosenberg, 1965). Satisfactory reliability and validity have been described among Nigerian adolescents (Oyefeso & Zacheaus, 1990).

Analysis

Statistical analyses were performed with the Statistical Product and Service Solutions (SPSS) software, 21st version. Descriptive statistics such as the mean (standard deviation) and frequency (percentages) were utilized in depicting the adolescents' sociodemographic variables and scores on the SBQ-R and the other study measures. The dependent variable was suicidality as measured by the SBQ-R while the other study

measures (HADS-Anxiety, HADS-Depression, RSES and GHQ-12) were the exploratory variables. The direction and strength of the relationship between SBQ-R score and the other measures was evaluated by applying correlational analyses. Logistic regression analysis was conducted to identify the variables that were significantly associated with those in the high suicide risk category (SBQ-R > 8) among the Nigerian adolescents. The level of statistical significance was set at a p value less than 0.05 and all tests were 2-tailed.

Results

Sociodemographic and study measure characteristics of the respondents (n = 1015)

A total of 1080 secondary school students were interviewed, out of which 36 declined to participate in the study and 29 questionnaire research booklets were not properly filled. Therefore, only 1015 were available for data analysis. As depicted in Table 1, females constituted 50.9% of the sample. The mean age of the students was 14.84 (SD=1.38) years. The mean total scores on the SBQ-R, HADS-Anxiety, HADS-Depression, RSES and GHQ-12 were 3.85 (SD=2.26), 5.66 (SD=4.08) and 2.47 (SD=3.73), 21.74 (SD=3.62) and 0.82 (SD=1.85) respectively. The lifetime prevalence rates of suicidal ideation and attempt were 9% and 3% respectively, while the prevalence of suicidal ideation over the past 12 months was also 12%. In addition, 10.2% constituted the suicide high risk group, and 10.1% of the respondents had the likelihood of suicidality in the future.

Gender differences in suicidality among Nigerian adolescents (n = 1015)

Table 2 showed that the female group had higher suicidality than the male group, but this difference was not statistically significant.

Correlational analyses between OCI-CV and other study measures (n = 1015)

Table 3 showed that there were statistically significant modest positive correlations between SBQ-R and HADS-Anxiety ($r_p = 0.538, p < 0.001$) and HADS-Depression ($r_p = 0.588, p < 0.001$). However, there was a statistically significant negative correlation between SBQ-R and Self-Esteem ($r_p = -0.556, p < 0.001$). In addition, there was also a statistically significant modest positive correlation between SBQ-R and GHQ ($r_p = 0.448, p < 0.001$) and weak positive correlation between SBQ-R and Age ($r_p = 0.168, p < 0.001$).

Logistic regression showing the variables that were significantly associated with the high suicide risk category (SBQ-R score > 8) among the Nigerian adolescents

Table 4 showed that for respondents who belong to the high suicide risk category according to the total SBQ-R score, they are 1.2 times more likely to

have higher HADS-Anxiety score and 1.3 times more likely to have higher HADS-Depression score. They are also 1.1 times more likely to have higher GHQ-12 score and about 1 time more likely to have lower score on the self esteem scale.

Table 1. Sociodemographic characteristics of respondents and mean scores on the study measures (n = 1015)

Variable	N (%) Mean (SD) [Range]
Gender	
Male	498 (49.1%)
Female	517 (50.9%)
Age	14.84 (1.38) [13 - 19]
Family Type	
Monogamous	659 (64.9%)
Polygamous	278 (27.4%)
Single parent	78 (7.7%)
Religion	
Christianity	510 (50.2%)
Islam	505 (49.8%)
Total SBQ-R	3.85 (2.26) [3 – 18]
HADS-Anxiety	5.66 (4.08) [1 – 18]
HADS-Depression	2.47 (3.73) [0 – 17]
RSES	21.74 (3.62) [5 – 26]
GHQ-12	0.82 (1.85) [0 – 12]
SBQ-R item 1	
Present (lifetime suicide ideation and/or attempt)	122 (12.0%)
Suicide ideation	92 (9%)
Suicide attempt	30 (3%)
Absent	893 (88.0%)
SBQ-R item 2	
Present (suicidal ideation over the past 12 months)	122 (12.0%)
Absent	893 (88.0%)
SBQ-R item 3	
Present (threat of suicide attempt)	82 (8.1%)
Absent	933 (91.9%)
SBQ-R item 4	
Present (likelihood of suicidal behaviour in the future)	103 (10.1%)
Absent	912 (89.9%)
Total SBQ-R	
< 8 (low suicide risk)	911 (89.8%)
8 and above (high suicide risk)	104 (10.2%)

Table 2. Gender differences in suicidality among Nigerian adolescents (n = 1015)

	Suicide risk (10.2%)	SBQ1 (12%)	SBQ2 (12%)	SBQ3 (8.1%)	SBQ4 (10.1%)
Gender					
Male	4.5%	5.6%	5.2%	3.6%	5.5%
Female	5.7%	6.4%	6.8%	4.5%	4.6%
p value	0.298	0.581	0.185	0.329	0.256

Table 3. Correlational analyses between total SBQ-R and other variables (n = 1015)

Variables	1	2	3	4	5
SBQ-R	1				
HADS-Anxiety	0.538**	1			
HADS-Depression	0.588**	0.823**	1		
RSES	-0.556**	-0.788**	-0.853**	1	
GHQ-12	0.448**	0.570**	0.582**	-0.603**	1
Age	0.168**	0.320**	0.338**	-0.324**	0.249**

** $p < 0.001$ **Table 4.** Logistic regression showing the variables that are significantly associated with the high suicide risk category (SBQ-R score >8) among the Nigerian adolescents

Variable	B	SE	Wald	OR	p value
HADS-Anxiety	0.168	0.042	16.232	1.183	<0.001
HADS-Depression	0.247	0.050	23.987	1.280	<0.001
RSES	-0.141	0.048	8.471	0.869	0.004
GHQ-12	0.117	0.053	4.955	1.124	0.026
Constant	-2.511	1.179	4.538	0.081	0.033

Discussion

This study investigated the prevalence and the associated factors of suicidality among Nigerian adolescents. The lifetime prevalence of suicidal ideation and suicidal attempt were 9% and 3% respectively. This is similar to 12.1% and 4.1% reported respectively within the same age range of American adolescents (Nock et al., 2013). This is also similar to another study in Mexico with the rates of 11.5% and 3.1% for suicidal ideation and attempt respectively (Borges, Benjet, Medina-Mora, Orozco, & Nock, 2008). However, there is scarcity of research examining the lifetime prevalence of suicidal behaviours in Sub-Saharan Africa. Most of the studies in Africa examined only the 12-month prevalence of suicidal behaviours (Asante, et al., 2017; Randall, et al., 2014). On the contrary, a study in Ethiopia reported a lifetime prevalence of suicidal ideation as 20.5% among high school adolescent students (Giru, 2016). It has been suggested that the wide margin of difference could possibly be attributed to cultural and reporting differences (Dunlavy, Aquah, & Wilson, 2015).

This study found a 12-month prevalence of suicidal ideation as 12%. This finding is within the range that has been reported in LMICs including African countries (Ahmad, et al., 2014; Asante, et al., 2017; Dunlavy, et al., 2015; Omigbodun, et al., 2008; Palmier, 2011; Randall, et al., 2014). A study previously reported in Nigeria found a higher prevalence of 20% among adolescents (Omigbodun, et al., 2008). This disparity could be attributed to the fact that the previous Nigerian study was conducted about a decade ago during

the time when there was little or no mental health awareness and advocacy. Presently in Nigeria, there has been a lot of improvement in school infrastructures and mental health advocacy. The introduction of school feeding system and free education programme which were flagged off in the region where this present study was conducted could have also possibly contributed to the lower prevalence rate of suicidal ideation. These programmes have reduced the socioeconomic burdens on both the adolescents and their caregivers. In addition, the government has been offering free mental health services for adolescents and other age groups in the state for about seven years prior to this study. The provision of free mental health services has reduced the risk of suicidal behaviours among these adolescents.

A study in Ghana reported higher prevalence rate of 18.2% and 22.2% for suicidal ideation and attempt respectively (Asante, et al., 2017). Another study in Republic of Benin reported 23.2% and 28.3% for suicidal ideation and attempt respectively (Randall, et al., 2014). However, a Tanzanian study found a lower prevalence of 7% for suicidal ideation which is similar to our study (Dunlavy, et al., 2015). The differences in prevalence rates across different African countries are due to cultural practices and taboos which could be reflective of reporting bias (Dunlavy, et al., 2015). Another reason could be due to different levels of socio-political stability across different countries. Studies have shown that socio-political instability and conflicts negatively impact quality of life and psychological well-being (Araya,

Chotai, Komproue, & de Jong, 2007; Scholte et al., 2004).

In this study, 10.2% of the adolescents belonged to the suicide high risk group. This finding is higher than what has been reported as 3.2% in a study using the Suicidality Module of the MINI among Nigerian undergraduates (Aloba, et al., 2017). The disparity is possibly as a result of the differences in the methodological approach and the age groups of participants with the latter having a higher age range.

In some LMICs, adolescent girls are at higher risk of suicidal behaviours notably because of rigid gender norms and discrimination (Organization, 2014; Petroni, Patel, & Patton, 2015). Another reason may be due to their higher tendency of engaging in both covert and overt help seeking behaviours, in addition to their higher score on affective disorders compared to males (Blumenthal & Kupfer, 1990). In this study, we found no significant gender association with suicidality, contrary to what has been generally reported (Asante, et al., 2017; Blumenthal & Kupfer, 1990; Organization, 2014). However, our study agreed with other studies that suggested that gender contributes less to suicidal behaviours (Dunlavy, et al., 2015; Peltzer&Pengpid, 2012; Randall, et al., 2014). This is also similar to what has been reported in a previous Nigerian study which showed no gender association with suicidality among Nigerian adolescents (Omigbodun, et al., 2008). The converse findings between Nigerian studies and others could be explained by a general under-reporting bias of suicidal behaviours which does not allow for gender differences (Dunlavy, et al., 2015).

In this study we found out that suicidality was positively correlated with anxiety, depression and psychological distress. This is consistent with other studies that have shown similar findings (Randall, et al., 2014; Randall, Rowe, & Colman, 2012; Wilson, Dunlavy, Viswanathan, & Bovet, 2012).

Our study also showed that there is a negative correlation between suicidality and self esteem.

References

- Abiodun, O. (1994). A validity study of the Hospital Anxiety and Depression Scale in general hospital units and a community sample in Nigeria. *The British Journal of Psychiatry*, 165(5), 669-672.
- Ahmad, N., Cheong, S. M., Ibrahim, N., & Rosman, A. (2014). Suicidal ideation among Malaysian adolescents. *Asia Pacific Journal of Public Health*, 26(5_suppl), 63S-69S.

This is also consistent with a study which showed that the lower the self esteem, the higher the chances of suicidal ideation (Becky Wanjiku Wanyoike, 2016). Emotional dysregulation and low self esteem are risk factors for adolescent suicidality (Csorba et al., 2003; Tamás et al., 2007).

On logistic regression, depression is more associated with suicidal behaviour than any other correlate. This is consistent with what other studies in other parts of the world have reported (Zong, 2015).

In conclusion, the results of this study have shown that suicidal behaviours are relatively high among adolescents, but lower than what has been previously reported in Nigeria and in some other African countries (Asante, et al., 2017; Omigbodun, et al., 2008; Randall, et al., 2014). The factors associated with Nigerian adolescent suicidality include depression, anxiety, psychological distress and self esteem.

This study is not without limitations. Our study was conducted in only the southwestern region of Nigeria. Therefore, caution must be exercised in generalizing the results of this study to other parts of the country. In addition, a non-clinical sample was adopted, hence, further studies involving clinical adolescent samples are still considered necessary to investigate the correlates of suicidality among Nigeria adolescents. Nevertheless, despite these limitations, this study has a few strengths. This is the first Nigerian study to examine the clinical correlates of adolescent suicidality and a relatively large sample size was utilized.

We believe that this study will serve as a good step at planning children and adolescent mental health interventions among the population of Nigerian adolescents.

Acknowledgments

We appreciate the staff and students of the high schools where the research was conducted.

- Aloba, O., Ojeleye, O., & Aloba, T. (2017). The psychometric characteristics of the 4-item Suicidal Behaviors Questionnaire-Revised (SBQ-R) as a screening tool in a non-clinical sample of Nigerian university students. *Asian Journal of Psychiatry*, 26, 46-51.

- Arat, G., & Wong, P. W. (2016). The relationship between parental involvement and adolescent mental health in six sub-Saharan African countries: findings from Global School-based

- Health Surveys (GSHS). *International Journal of Mental Health Promotion*, 18(3), 144-157.
- Araya, M., Chotai, J., Komproe, I. H., & de Jong, J. T. (2007). Effect of trauma on quality of life as mediated by mental distress and moderated by coping and social support among postconflict displaced Ethiopians. *Quality of life research*, 16(6), 915-927.
- Asante, K. O., Kugbey, N., Osafo, J., Quarshie, E. N.-B., & Sarfo, J. O. (2017). The prevalence and correlates of suicidal behaviours (ideation, plan and attempt) among adolescents in senior high schools in Ghana. *SSM-Population Health*, 3, 427-434.
- Becky Wanjiku Wanyoike, D. D. N., Dr. B.E.E Omulema, Dr. M. Njoroge, (Prof) M. Mwenda. (2016). Influence of Self Esteem on Suicidal Ideation among Youth in Universities in Nairobi County. *International Journal of Social Science and Humanities Research*, 4(2), 408 - 416.
- Blumenthal, S. J., & Kupfer, D. J. (1990). *Suicide over the life cycle: Risk factors, assessment, and treatment of suicidal patients*: American Psychiatric Pub.
- Borges, G., Benjet, C., Medina-Mora, M. E., Orozco, R., & Nock, M. (2008). Suicide ideation, plan, and attempt in the Mexican adolescent mental health survey. *Journal of the American Academy of Child & Adolescent Psychiatry*, 47(1), 41-52.
- Csorba, J., Rozsa, S., Gadoros, J., Vetro, A., Kaczvinszky, E., Sarungi, E., et al. (2003). Suicidal depressed vs. non-suicidal depressed adolescents: differences in recent psychopathology. *Journal of affective disorders*, 74(3), 229-236.
- Dunlavy, A. C., Aquah, E. O., & Wilson, M. L. (2015). Suicidal ideation among school-attending adolescents in Dar es Salaam, Tanzania. *Tanzania Journal of Health Research*, 17(1).
- Eaton, D. K., Kann, L., Kinchen, S., Shanklin, S., Flint, K. H., Hawkins, J., et al. (2012). Youth risk behavior surveillance—United States, 2011. *Morbidity and Mortality Weekly Report: Surveillance Summaries*, 61(4), 1-162.
- Giru, B. W. (2016). Prevalence and Associated Factors of Suicidal Ideation and Attempt Among High School Adolescent Students in Fitch Town, North Shoa, Oromia Region, Ethiopia, 2012: Institutional Based Cross Sectional Study. *Journal of Health, Medicine and Nursing*, Vol. 23.
- Glozah, F. N., & Pevalin, D. J. (2016). Association between psychosomatic health symptoms and common mental illness in Ghanaian adolescents: Age and gender as potential moderators. *Journal of health psychology*, 1359105316628736.
- Goldberg, D. (1978). *Manual of the general health questionnaire*: NFER Nelson.
- Gureje, O. (1991). Reliability and the factor structure of the Yoruba version of the 12-item General Health Questionnaire. *Acta Psychiatrica Scandinavica*, 84(2), 125-129.
- Knizek, B. L., Kinyanda, E., Owens, V., & Hjelmeland, H. (2011). Ugandan men's perceptions of what causes and what prevents suicide. *Journal of men, masculinities and spirituality*, 5(1), 4.
- Kutcher, S. P., & Szumilas, M. (2008). Youth suicide prevention. *Canadian Medical Association Journal*, 178(3), 282-285.
- McKENZIE, K., Serfaty, M., & Crawford, M. (2003). *Suicide in ethnic minority groups*: RCP.
- McMahon, E. M., Keeley, H., Cannon, M., Arensman, E., Perry, I. J., Clarke, M., et al. (2014). The iceberg of suicide and self-harm in Irish adolescents: a population-based study. *Social psychiatry and psychiatric epidemiology*, 49(12), 1929-1935.
- Nock, M. K., Green, J. G., Hwang, I., McLaughlin, K. A., Sampson, N. A., Zaslavsky, A. M., et al. (2013). Prevalence, correlates, and treatment of lifetime suicidal behavior among adolescents: results from the National Comorbidity Survey Replication Adolescent Supplement. *JAMA psychiatry*, 70(3), 300-310.
- 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.
- Organization, W. H. (2014). *Health for the world's adolescents: a second chance in the second decade: summary*.
- Osafo, J., Hjelmeland, H., Akotia, C. S., & Knizek, B. L. (2011). The meanings of suicidal behaviour to psychology students in Ghana: A qualitative approach. *Transcultural psychiatry*, 48(5), 643-659.
- Osman, A., Bagge, C. L., Gutierrez, P. M., Konick, L. C., Kopper, B. A., & Barrios, F. X. (2001). The Suicidal Behaviors Questionnaire-Revised (SBQ-

- R): validation with clinical and nonclinical samples. *Assessment*, 8(4), 443-454.
- Oyefeso, A. O., & Zacheaus, A. (1990). Self-esteem as Determined by Gender Differences among Yoruba Adolescents to Ibadan, Nigeria: A Research Note. *Journal of Child Psychology and Psychiatry*, 31(3), 461-463.
- Page, R. M., Saumweber, J., Hall, P. C., Crookston, B. T., & West, J. H. (2013). Multi-country, cross-national comparison of youth suicide ideation: Findings from Global School-based Health Surveys. *School Psychology International*, 34(5), 540-555.
- Palmier, J. B. (2011). Prevalence and correlates of suicidal ideation among students in sub-Saharan Africa.
- Patton, G. C., Coffey, C., Sawyer, S. M., Viner, R. M., Haller, D. M., Bose, K., et al. (2009). Global patterns of mortality in young people: a systematic analysis of population health data. *The Lancet*, 374(9693), 881-892.
- Peltzer, K., & Pengpid, S. (2012). Suicidal ideation and associated factors among school-going adolescents in Thailand. *International journal of environmental research and public health*, 9(2), 462-473.
- Petroni, S., Patel, V., & Patton, G. (2015). Why is suicide the leading killer of older adolescent girls? *The Lancet*, 386(10008), 2031-2032.
- Preparations & Organization, W. H. (2014). WHO Expert Committee on Specifications for Pharmaceutical Preparations: Forty-eighth Report: World Health Organization.
- Randall, J. R., Doku, D., Wilson, M. L., & Peltzer, K. (2014). Suicidal behaviour and related risk factors among school-aged youth in the Republic of Benin. *PloS one*, 9(2), e88233.
- Randall, J. R., Rowe, B. H., & Colman, I. (2012). Emergency department assessment of self-harm risk using psychometric questionnaires. *The Canadian Journal of Psychiatry*, 57(1), 21-28.
- Rosenberg, M. (1965). *Society and the adolescent self-image* (Vol. 11): Princeton university press Princeton, NJ.
- Scholte, W. F., Olff, M., Ventevogel, P., de Vries, G.-J., Jansveld, E., Cardoso, B. L., et al. (2004). Mental health symptoms following war and repression in eastern Afghanistan. *Jama*, 292(5), 585-593.
- Segun-Martins, O. I. (2013). Influence of Depression, Perfectionism, and Life-Stress on Suicidal Ideation among Youths. *Nigerian Journal of Applied Behavioural Sciences*, 1, 32-42.
- Tamás, Z., Kovacs, M., Gentzler, A. L., Tepper, P., Gádoros, J., Kiss, E., et al. (2007). The relations of temperament and emotion self-regulation with suicidal behaviors in a clinical sample of depressed children in Hungary. *Journal of abnormal child psychology*, 35(4), 640-652.
- Wilson, M. L., Dunlavy, A. C., Viswanathan, B., & Bovet, P. (2012). Suicidal expression among school-attending adolescents in a middle-income sub-Saharan country. *International journal of environmental research and public health*, 9(11), 4122-4134.
- Zigmond, A. S., & Snaith, R. P. (1983). The hospital anxiety and depression scale. *Acta Psychiatrica Scandinavica*, 67(6), 361-370.
- Zong, S. (2015). A Study on Adolescent Suicide Ideation in South Korea. *Procedia-Social and Behavioral Sciences*, 174, 1949-1956.