

# Personal-Social predictors of suicide ideation among emerging adults in a selected University in Rivers State, Nigeria

Amadi, Cajetan N. *PhD* and Mpumechi, Mary

Department of Educational Psychology, Guidance and Counselling, University of Port Harcourt

**Abstract:** *This study explored the personal-social predictors of suicide ideation among undergraduate students of the Rivers State University, Port Harcourt. The study was guided by three research questions and three hypotheses. The correlational research design was adopted for the study and the population comprised all undergraduate students of the Rivers State University during the 2020/2021 academic session. A sample size of 598 students was drawn for the study using multi stage sampling technique. The instrument used in collecting data for the study was a questionnaire designed by the researcher titled "Personal-Social predictors of suicide ideation Questionnaire (P-SPSIQ) patterned after the 4-point Likert scale of SA= Strongly Agreed, A= Agreed, D= Disagreed, SD= Strongly Disagreed. It has two sections (A & B). Section A elicited information on the respondents' demographic profile, while section B is further divided into three sub scales (I – III) containing items that measure Pessimism, Family conflict and Substance Abuse respectively. The reliability of the instrument was determined using Cronbach Alpha method and the result is as follows: Pessimism (0.77), Family conflict (0.84) and substance abuse 0.83. Data generated from the instrument were analyzed using simple regression to answer research questions and their corresponding hypotheses. Findings revealed that pessimism is a significant predictor of suicide ideation among students. Also, family conflict significantly predicts suicide ideation among students. Again, substance abuse is significant predictor of suicide ideation among students. Based on the findings, recommendations were made, among which was that students should be counselled on positive self-esteem and self-concept as well as guiding them on rational emotive thought to imbibe optimism as part of their personality.*

**Key words:** Emerging adults, Suicide ideation, pessimism, family conflict, substance abuse

## Background to the study

Demographic shifts across the globe have occurred over the past half century, making the late teens and early twenties not simply a brief period of transition into adult roles but a distinctive period of the life course, marked by change and discovery of possible life courses, (Arnett, 2000). In the 70s and beyond, the average age of marriage in most parts of the world including Nigeria was about 21 for women and 24 or so for men. But as time progresses and nations become more and more industrialized, certain changes began to occur. These changes have altered the nature of development in the late teens and early twenties for young people in these industrialized societies. Given the fact that marriage and parenthood are delayed until the middle or late twenties for most people, it is no longer normative for the late teens and early twenties to be a time of entering and settling into long-term adult roles. On the contrary, these years are more typically a period of frequent change and exploration (Arnett; Rindfuss, cited in Arnett, 2000). Many markers of the transition to adulthood, such as median age of first marriage, are being reached at older ages now than in the past. Furthermore, large numbers of young people (sometimes referred to as "boomerang kids") are moving back in with their parents while exploring career directions, a phenomenon gaining the attention of parenting educators (Bold, 2001).

Emerging adulthood has been conceived as a stage of development marked by exploration, increased mobility, indecisiveness, uncertainty and ambivalence for young people. The concept of emerging adulthood has been put forward by Arnett (2000) to distinguish the evolution from adolescence to adulthood. It is a period between adolescence and adulthood. Asogwa and Ekechukwu (2022) defined an adolescent as a person who has left the childhood behaviors, be more matured and begins to exhibit some other characteristics that will enable him or her flow into real adulthood. They noted further that adolescence is not only a vital stage of growth and development but also the stage when young people extend their relationships beyond parents and family and are intensely influenced by their peers and the outside world. In view of this, Arnett then explained emerging adults as those young people who fall between the ages of 18 and 25. Aside from age, there are other qualities that separate the multitude of young people within this age group. Emerging adults characteristically spend more years in tertiary schooling, being single, getting more involved in intimate affairs mainly because of their large circle of friendship both physically and in the virtual space. This phase of transition equally makes them become more exploratory in nature and consequently become susceptible to pressures from peers and engaging in several risky behaviours such as substance abuse and harmful sexual activities (Mars, Burrows, Hjelmeland, & Gunnell, 2014). At this point in their life, they are comparatively free from parental scrutiny and so prefer an independent lifestyle regardless of the social pressures they may face (Mars, Burrows, Hjelmeland, & Gunnell, 2014). Within the context of this study therefore, the term

emerging adult used to refer to those groups of students in tertiary institutions who are in between adolescence and adulthood based on the specified age. It may be used interchangeably with adolescence, but emerging adult will be used more often.

This period is indeed characterized by transformations and transition from a particular status to another, in various spheres all at the same time. Young adults at this point have to attend to several new problems; for instance as regards building their own personality and identity, growing their self-worth, building their sense of independence and responsibility etc. Meanwhile, they themselves are still subjected to the progressive and varying psycho-social and physical processes that are ongoing in their lives. Besides these, they are often faced with various expectations from society, peers and family members, which may sometimes be too high and possibly unattainable for them; thereby arousing some level of frustration and anxiety, nervousness and stress; and consequently a sense of losing control (Patton, Sawyer, Santelli, Ross, Afifi, Allen, et al., 2016). In order therefore to successfully cope with these emotions and confront these challenges, these young adults have to acquire a considerable measure of supporting resources such as a secure living condition, stable relationships, and reliable economic resources. However, certain psychosocial risk factors may constitute hindrance towards accessing these resources which may bring about some feelings of distress including suicidal thoughts.

Suicide ideation and behaviour among young people tends to have increasingly become an essential public health concern. Suicide has been identified by The World Health Organization, WHO, (2001) as one of the three principal causes of death among adolescents and young adults, and the enormity of this problem becomes even greater when suicidal ideation and failed suicide attempts are taken into consideration. Among emerging adults in our society, especially students in tertiary institutions, suicidal behaviours have become so prevalent, and therefore call for urgent investigation. Suicidal ideation which include suicidal thoughts or suicidal attempts, have become a contemporary public health subject-matter. While suicide itself may be defined as deliberate self-inflicted death; Suicide attempt is a planned but unsuccessful act of trying to kill oneself. But suicidal behaviour refers to any intentional action that has impending life-threatening consequences. In the words of Hudgens (2003), Suicidal behaviours often occur in response to a situation that the person views overwhelming, such as social isolation, death of a loved one, emotional trauma, serious physical illness, aging, unemployment, or financial problems, guilt feelings or dependence on alcohol or other drugs.

Several underlying factors may predict suicidal behaviours among emerging adults and these factors which place them at risk for suicide are multifaceted and tend to interfere with their ability to cope with situations of life. Besides some demographic factors, like sex and age, some of these characteristics as noted by Krug, Dahlberg, Mercy, Zwi, and Lozano (2002) include biological, environmental, social and psychiatric factors, and also factors associated with the life history of an individual. Some studies on emerging adults have linked these suicidal behaviours and features to the relative level of individualism and the craving to discover more about self. Scholars (Dugas, Low, O'Loughlin, and O'Loughlin, 2015; Wilcox et al., 2010) have argued that social forces that mediate the advancement from adolescence to adulthood may cause suicidal ideation, especially in an attempt to find ways of coping through the challenges of the process of advancement.

Suicidal ideation is the foremost leading cause of mental illness and disability among students in Nigerian universities whose ages range between 16 and 25 years, and nearly about 75, 000 of these students received emergency treatment after a suicidal attempt. School is an institution where many young students feel a pressure to develop identities, develop life goals, and make meaningful relationships. Internal conflicts can develop when these complex social lives, academic roles, and extracurricular activities disagree with an individual's beliefs or schedule (Ohayon and Roberts, 2014). As noted by Feixas, Montesano, Compañ, Salla, Dada, Pucurull and Guàrdia, (2014), high rate of depression has been associated with internal conflicts and an increase in level of suicidal ideation. Similarly, Potter, Silverman, Connorton and Posner, (2004) noted that internal conflict is part of the mental health challenge, which could lead to underachievement and increase the risk factors for suicidal ideation. Suicidal ideation is a common phenomenon among students irrespective of age, gender, ethnicity, race, academic attainment or even socio-economic status. Suicidal ideation, or suicidal thought, means thinking about death or suicide.

### **Concept of Suicide Ideation**

Suicide ideation is the thought, intent, plan and imagination of an individual concerning their wish to commit suicide. Suicidal ideation is a common phenomenon among all individuals irrespective of age, gender, ethnicity, race, academic performance or even social status. Suicidal ideation is a known risk factor for suicidal attempt, which in turn increases risk for suicidal death (Centre for Disease Control, 2006; Denise, Middlebrook, Pamela, LeMaster, Janette, Douglas & Spero 2008). However, Suicidal ideation most likely happens prior to a suicide attempt or suicide (Lewinsohn, Rohde, Seeley, 1996; Gili-Planas, Roca-Bennasar, Ferrer-Perez and Bernardo-Arroyo, 2001) and it involves the tendency to die owing to an inability to cope with life difficulties (Mind, 2016).

Suicidal ideation as noted that Ciesielski (2013) defined as an individual's desire to die or to commit suicide. Zhang (2017) explained that the shape of suicidal ideas can vary, ranging from quick thoughts to planning suicide attempts, and from attempting role play to failed suicide attempts. Students with suicidal ideation are those who currently have a plan to and want to commit suicide, but have

not yet committed to action or open suicide attempts. The idea of suicide logically precedes attempting suicide or realizing suicide. The idea of suicide also includes suicidal threats that have been expressed in open behaviour or verbally expressed to others (Klein & Miller, 2011). Zhang (2017) defined suicidal ideation as an individual's desire to die or aim of committing suicide. Bland, Tudor and McNeil (2007) explained that for a death to be defined as suicide, it must be accompanied by the intention to die. Nevertheless, intentions are not easy to determine, because the intentions are very varied and can precede, for example, to get attention, take revenge, end something perceived as suffering, or end life (Hawton & Heeringen, 2008). Suicidal ideation is part of suicidal behaviour. Suicidal ideation refers to the view of the experience that life is worthless, from a fleeting thought to a real thought, or a thought about self-destruction. Suicidal ideation logically arises first from suicide attempts or completed suicide, so suicidal ideation is the right construct to focus on the intensity, spread, and characteristics of suicidal behavior and can later measure suicidal ideation as a predictor of a potential risk of suicide. Individuals with suicidal ideation are individuals who currently have plans and suicidal desires but have not clearly committed suicide in recent times (Kavalidou, 2017).

There are some causes of suicidal ideation and self-destructive behaviour among students. These causes include frustration, anger, bullying, aggression, alcoholism, hopelessness, substance abuse, possession of lethal weapons, terminal illness, loss of loved ones, pre-existing family psychiatric conditions, low school achievement, betrayal, guilt, crashing of a business, and depression. Depression causes feelings of sadness and/or a loss of interest in activities once enjoyed. Other causes according to Ciesielski (2013) include acute anxiety, lack of social support, mental disorders (e.g. mood, anxiety, substance abuse) and a history of suicidal plans, ideation, and attempts.

### **Pessimism and Suicide**

Pessimism is one factor to be considered as a predictor of suicide ideation among emerging adults. Although it appears that little or no attention has been given to it by researchers in relation to suicide. Most emerging adults grope in hopelessness and seeing no good in the near future, they tend to contemplate suicide. Being optimistic is regarded as something that is always good, while being pessimistic is seen as always bad (Yu, n.d.). In agreement with this notion, Chang, (2001) noted that optimism has therefore been associated with less psychological maladjustment, while pessimism is related to more psychological maladjustment. Over the years, researches such as those of Carver, Scheier, & Segerstrom, (2010; Scheier & Carver, (1985); Scheier, Carver, and Bridges, (2001), have indicated and backed up the narrative that optimism signifies a vital and adaptive psychological construct while pessimism suggests a maladaptive construct. With this in view, pessimism has been described by various studies as being linked to a negative outlook on life (Dember, Martin, Hummer, Howe, 1989) including suicide ideation. More explicitly, depression and suicide are two closely-knit adjustment outcomes in relation to pessimism, Yu, (n.d.). Suicide ideation linked with pessimism could be averted. Szanto, Mulsant, Houck, Miller, Mazumdar, and Reynolds, (2001) averred that suicide risk could be lessened if negative cognitions are changed. Thus, by changing future orientation, which is a cognitive variable, suicide risk may be reduced. Within the confines of this study, pessimism suggests the negative feeling or doubt an individual has of himself, and which makes such individual feel inadequate, thereby leading to suicide behaviour.

Earlier studies (Grewal & Porter, 2007) had pointed out the connection between pessimism and suicide; but noted however that hope may be a better predictor of suicide. Hope has been explained by Snyder, Irving, & Anderson, cited in o'keefe (2009) as, "a positive motivational state that is based on an interactively derived sense of successful agency (goal-directed energy), and pathways (planning to meet goals)". A person with high levels of hope can be described as having the ability and will to create a number of goals and having a positive mindset while pursuing said goals (Snyder, 2002). On the other hand, an individual who has low levels of hope often engages in negative thoughts about goals, experiences distress, and often gets off track in their path towards said goals. Overall, individuals with high hope continue to surpass low hope individuals in physical health, mental health, academics, and athletic activities (Snyder, 2002).

### **Substance Abuse and Suicide**

Substance abuse has also been viewed as a predictor of suicide ideation among emerging adults. A good number of studies have established the relationship between substance abuse and suicide ideation. For instance, Substance Abuse and Mental Health Services Administration, SAMHSA, (2016) noted that Individuals with substance use disorders are particularly susceptible to suicide and suicide attempts. Indeed, suicide is a leading cause of death among people who misuse alcohol and drugs (SAMHSA, Wilcox, Conner, and Caine, Pompili et al., cited in SAMHSA 2016). Substance abuse appears to be associated with more frequent suicide attempts, particularly in retrospective studies among high-risk youth. Bohnert, Ilgen, and Louzon, (2017) averred that substance use heightens the risk of suicidal behaviour. Similarly, Pompili, Serafini and Innamorati, (2018) noted that acute and chronic drug abuse

may cause judgement impairment, weaken impulse control and interrupt neurotransmitter pathways, leading to suicidal tendencies through disinhibition. Abuse of substances as averred by Akindutire and Adegboyega, (2012) has been found to have damaging effect on the overall wellbeing of students, but more predominantly on their mental health. Mba (2008) stated that it has caused some physiological and psychiatric disturbances according.

The abuse of substances as averred by Akindutire and Adegboyega, (2012) has been noted to have damaging effect on the overall wellbeing and particularly mental health of students. This has led to many health challenges including physiological and psychiatric disturbances, and has also been alleged to give rise to poor psychosocial adjustment, such as involvement in suicide; and risk factor for most unremitting diseases and family relationship problems, among others (Oshodi, Aina and Onajole, 2010). Students constantly get involved in the use and abuse substances possibly as a result of ignorance or poor information about the harmful consequences of abuse of drugs or even due to peer pressure and influence.

### **Family Factors and suicide**

Family factors may also be another factor leading to suicide behaviour among students. Family disruptions like parental divorce or separation, unhealthy family relationships, death, or terminal illness of parents, as well as violence in the family have been linked with suicidal ideation among students (Green, and Okafor & Okafor, cited in Mba, 2010). According to these studies, attitudes, feelings and actions of parents, have influence on the child and create lasting impression in the child which invariably becomes visible in the way the child perceives him or herself and others. A child growing in a hostile and violent family may decide to break away from the unbearable social interactions of the family. It is common knowledge that children emulate most of their parents' aggressive tendencies and internalize parents' resentment and criticism of them. Consequently, the children view themselves as worthless and with all forms of negativity (Okafor and Okafor, 1998). In view of this, suicidal behaviour may consequently become one of the approaches available for the child to relieve his or her intolerable pent-up feelings. In the present study, family conflict suggest those negative family factors, either from parents or the child himself, which may lead to suicide behaviours.

Although there may be variation in family characteristics according to culture and nationality, but the same family life as noted by Zhai et al., (2015) can influence the incidence of suicidal behaviours and suicide like parental relationships and parental structures. A dysfunctional relationship among parents can be a powerful indicator of suicidal ideation coupled with parental problems like death of a partner, marriage break up, parental abuse and separation Donath, Grassel, Baler, & Hillemacher, (2014). Absence of meaningful social ties within the family may predict suicidal behaviour among students. The family plays a critical role in the risk for suicidal behaviour. Apart from gene-related factors, there are also many other features of family life that have impact on suicidal behaviour. One of the things common in causing the thought of suicide is family background, where at times parents do not show their children enough love.

### **Research Questions**

The following research questions guided the study:

1. What is the extent to which pessimism predict suicide ideation among students in tertiary institutions in Rivers State?
2. To what extent does family conflict predict suicide ideation among students in tertiary institutions in Rivers State?
3. To what extent does substance abuse predict suicide ideation among students in tertiary institutions in Rivers State?

### **Hypotheses**

The following hypotheses tested at 0.05 level of significance guided the conduct of the study:

1. There is no significant prediction of pessimism on suicide ideation among students in tertiary institutions in Rivers State.
2. Family conflict does not significantly predict suicide ideation among students in tertiary institutions in Rivers State.
3. Substance abuse does not significantly predict suicide ideation among students in tertiary institutions in Rivers State.

### **Materials and Methods**

The correlational research design was adopted for the study. The population for the study was all undergraduate students of Rivers State University, Port Harcourt. A sample of 598 students was drawn using the multistage sampling technique. The instrument used in collecting data for the study was a questionnaire designed by the researcher titled "Personal-Social predictors of suicide ideation Questionnaire (P-SPSIQ)". It was patterned after the 4-point Likert scale of SA= Strongly Agreed, A= Agreed, D= Disagreed, SD=

Strongly Disagreed. It has two sections (A & B). Section A is designed to elicit information on the respondents' demographic profile. On the other hand, sub-section B is further divided into three sub scales (I – III), containing items that measure Pessimism, Family conflict and Substance Abuse respectively. The reliability of the instrument was determined using Cronbach Alpha method. Data generated from the instrument were analyzed using simple regression to answer research questions and their corresponding hypotheses.

**Results and Discussion**

**Research Question One:** To what extent does pessimism predict suicide ideation among students in tertiary institutions in Rivers State?

**Hypothesis One:** pessimism does not significantly predict suicide ideation among students in tertiary institutions in Rivers State.

**Table 1:** Simple Linear regression analysis showing pessimism as a predictor of suicide ideation among students in tertiary institutions:

R	R Square		Adjusted R Sq.		Std. Error of the Est.		
0.118	0.014		0.012		11.638		
Model	Sum of Sq.	Df	Mean Sq.	F	alpha	Sig.	Result
Regression	1148.67	1	1148.67	8.481	0.05	.0043	Significant
Residual	80997.80	598	135.448				
Total	82146.47	599					

Table 1 shows that calculated R-value is 0.118 while R-square is 0.014. Adjusted r value is 0.012 and the standard error is 11.638. The R-square value has shown that pessimism account for about 1.4% ( $0.014 \times 100$ ) of suicide behaviour among students. Also, calculated sig-value was 0.0043. Therefore, since sig ( $p=0.0043 < 0.05$ ) is less than the alpha level, the null hypothesis is rejected meaning that pessimism is a significantly predictor of suicide ideation among students in tertiary institutions in Rivers State.

**Research Question Two:** To what extent does family conflict predict suicide ideation among students in tertiary institutions in Rivers State?

**Hypothesis Two:** Family conflict does not significantly predict suicide ideation among students in tertiary institutions in Rivers State.

**Table 2:** Simple Linear regression analysis showing family conflict as a predictor of suicide ideation among students in tertiary institutions:

R	R Square		Adjusted R Sq.		Std. Error of the Est.		
0.373	0.039		0.136		11.689		

Model	Sum of Sq.	Df	Mean Sq.	F	alpha	Sig.	Result
<b>Regression</b>	439.774	1	439.774	3.219	0.05	.003	Significant
<b>Residual</b>	81706.700	598	136.633				
<b>Total</b>	82146.47	599					

Table 2 shows that calculated R-value is 0.373 while R-square is 0.39. Adjusted r-value is 0.139 and the standard error is 11.689. The R-square value has shown that family conflict account for about 3.9% ( $0.39 \times 100$ ) of suicide behaviour among students. Also, calculated sig-value was 0.003. Therefore, since sig ( $p=0.003 < 0.05$ ) is less than the alpha level, the null hypothesis is rejected meaning that family conflict is a significantly predictor of suicide ideation among students in tertiary institutions in Rivers State.

**Research Question three:** To what extent does substance-abuse predict suicide ideation among students in tertiary institutions in Rivers State?

**Hypothesis three:** Substance-abuse does not significantly predict suicide ideation among students in tertiary institutions in Rivers State.

**Table 3:** Simple Linear regression analysis showing substance-abuse as a predictor of suicide ideation among students in tertiary institutions:

Model	R	R Square	Adjusted R Square
1	.403	.162	.140

  

Model	Sum of Sq.	df	Mean Sq.	F	Sig.	Result
<b>Regression</b>	133.195	1	133.195	7.971	.005	Significant
<b>Residual</b>	82013.279	598	137.146			
<b>Total</b>	82146.473	599				

Table 3 shows calculated R-value is 0.403 R-square is 0.162 while adjusted R-value is 0.140. In answering the research question, the R-square value has shown that self-esteem account for only 4% ( $0.40 \times 100$ ) of suicide behaviour among students. Also, calculated sig-value was 0.005. Therefore, since sig ( $p=0.005 > 0.05$ ) is less than the alpha level, the null hypothesis is rejected meaning that substance abuse is a significantly predictor of suicide ideation among students in tertiary institutions in Rivers State.

## Conclusion

Based on the findings, it is concluded that pessimism is a significant predictor of suicide ideation among students. Also, family conflict significantly predicts suicide ideation among students. Again, substance abuse is significant predictor of suicide ideation among students. Suicide ideation and other behaviours related to suicide are found to be harmful and detrimental to both the individual and society. Furthermore, the harsh economic conditions and unbelievable cases recorded have shown that these ugly factors have incredible impact on the overall wellbeing of the students. Overall, the catastrophic effect of suicide or suicide related behaviours is much on the individual and the society at large and adequate counseling is a sure way to combating these ugly trends.

## Recommendations

1. On the basis of the findings that pessimism is a significant predictor of suicide ideation, it is recommended that students should be counselled on positive self-esteem and self-concept as well as guiding them on rational emotive thought to imbibe optimism as part of their personality.
2. Parents and guardians should do everything possible to bring affection to their family. In situations where there is total dysfunctionality in the family, it is recommended that counsellors should be involved to help resolve such family problems.
3. It is recommended also that parents should guide their children aright and watch the kind of company they keep. Students themselves should be careful not to be negatively influenced by their peers.

## References

- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, 55(5), 469-480
- Asogwa, E. U. (2015). Knowledge and attitude towards incidence of suicide among university students I Enugu State, Nigeria, *Ph. D. Thesis*, Faculty of Education, University of Port Harcourt, Nigeria.
- Bohnert, K.M, Ilgen, M.A, Louzon S. (2017). Substance use disorders and the risk of suicide mortality among men and women in the US veterans Health Administration. *Addiction*; 112:1193-1201 Crossef, Google scholar
- Carver, C. & Scheier, M.F, in Chang, E. C, (Ed), (2001). *Optimism & pessimism: Implications for theory, research, and practice*. Washington, DC: American Psychological Association,
- Centre for Disease Control, 2006; Denise, Middlebrook, Pamela, LeMaster, Janette, Douglas & Spero 2008)
- Dember, W. N., Martin, S. H., Hummer, M. K., & Howe, S. R. (1989).The measurement of optimism and pessimism. *Current Psychology: A Journal for Diverse Perspectives on Diverse Psychological Issues*, 8, 102-119. doi:10.1007/BF02686675
- Donath, C., Grassel, E., Baler, D., & Hillemacher, T. (2014). Is parenting style a predictor of suicide attempts in a representative sample of adolescents. *BMC Pediatrics*, 14(1), 113.
- Dugas.E., Low.N, K., E., O'Loughlin.E., & O'Loughlin.J. (2015). Recurrent suicidal ideation in young adults. *Can J Public Health*, 106(5), 303–307
- Hawton K, van Heeringen K. Suicide. *Lancet* (2009) 373:1372–81. doi:10.1016/S0140 6736(09)60372-X
- Krug, E.G., Dahlberg, L.L., Mercy, J.A., Zwi, A.B., & Lozano, R. (2002). *World report on violence and health*. Geneva: World Health Organization.
- Lewinsohn PM, Rohde P, Seeley JR, Baldwin CL. Gender differences in suicide attempts from adolescence to young adulthood. *J Am Acad Child Adolesc Psychiatry*. 2001;40(4):427–434.

Mars, B., Burrows, S., Hjelmeland, H., & Gunnell, D. (2014). Suicidal behaviour across the African continent: a review of the literature. *BMC Public Health*, 14(1), 606.

Mba, S. A. (2010). Prevalence and prevention of suicidal behaviours among undergraduates of universities in south eastern states of Nigeria: 1999-2008. Unpublished doctorate thesis submitted to the department of health and physical education, university of Nigeria, Nsukka. Zhai et al., (2015)

Miller, D. N., Eckert, T. L. & Mazza, J. J. (2009). Suicide prevention programs in schools: A review and public health perspective. *School Psychology Review*, 38: 168-188.

Ohayon, M. M. & Roberts, L. W. (2014). Links between occupational activities and depressive mood in young adult populations. *Journal of Psychiatric Research*, 49, 10-17.

Patton, G. C., Coffey, C., Sawyer, S. M., Viner, R. M., Haller, D. M., Bose, K., ... & Mathers, C. D. (2009). Global patterns of mortality in young people: a systematic analysis of population health data. *The Lancet*, 374(9693), 881-892.

Pompili, M., Serafini, G., Innamorati, M., (2018). Suicidal behaviour and alcohol abuse. *Int J Environ Res Public Health*, 7:1392-1431 Crossref, Google scholar

Pompili, M., Serafini, G., Innamorati, M., (2018). Suicidal behaviour and alcohol abuse. *Int J Environ Res Public Health*, 7:1392-1431 Crossref, Google scholar

Snyder, C. R. (2002). Hope theory: Rainbows in the mind. *Psychological Inquiry*, 13(4), 249-275. doi:10.1207/S15327965PLI1304\_01 Sociocultural Determinants of Suicide Ideation: A Comparison Between American and Ghanaian College Samples. *Suicide and Life-Threatening Behavior* 33 (2)

Substance Abuse and Mental Health Services Administration. (2016). Substance Use and Suicide: A Nexus Requiring a Public Health Approach. In Brief

WHO Global Health Observatory Adolescent Health. Geneva: World Health Organisation; (2017). Available online at: <http://apps.who.int/gho/data/view.wrapper.MortAdov?lang=en> [Google Scholar]

Wilcox, H. C., Arria, A. M., Caldeira, K. M., Vincent, K. B., Pinchevsky, G. M., & O'Grady, K. E. (2010). Prevalence and predictors of persistent suicide ideation, plans, and attempts during college. *Journal of affective disorders*, 127(1), 287-294

Yu, E.A. (n.d.). Optimism/Pessimism and Future Orientation in Predicting Depressive Symptoms and Suicide Behavior in Primary Care Adults: Is There Evidence for an Interactive Model?

Zhang, J., Yanzheng, L. & Long, S. (2017). Psychological strain and suicidal ideation: A comparison between Chinese and US college students. *Psychiatry Research* 255 (2017) 256-262