

RELATIONSHIP BETWEEN SOCIAL NETWORKING SITES AND DEPRESSION TENDENCIES AMONG IN-SCHOOL ADOLESCENTS IN ANAMBRA STATE IN POST COVID-19

Nweke Virginia Ego and Obumse, Nneka .A. (Ph.D)

^{1&2} *Department of Educational Foundations, Chukwuemeka
Odumegwu Ojukwu University, Anambra State*

E-mail: joviego2015@gmail.com¹ & naobumse@coou.edu.ng²

Abstract

This study investigated the relationship between social networking sites and depression tendencies among in-school adolescents in Anambra State in post COVID-19. Four research questions guided the study while four hypotheses were formulated. This study used the correlational survey research design. The population of this study comprised all the 21,223 male and female undergraduates in the two public universities in Anambra State. The sample size of this study will consist of 525 undergraduate university students in Anambra State using the multi-stage sampling technique. The instrument used has two sections, A and B, Section A consists of the Demographic factors while section B embraces Non-cognitive and Non-standardized 50 items. The self-designed instruments were structured after modified Likert four-points relating to rating scales of Strongly Agree (4-points), Agree (3-points), Disagree (2-points), and Strongly Disagree (1-point). Face and content validities were rightly ensured to make sure that the instrument measures what it ought to measure. Also, to determine the internal consistency of the instrument, Cronbach Alpha was used and an overall co-efficient of 0.87 was obtained. Pearson Product Moment Correlaiton co-efficient was used to answer the research questions while the linear regression was used to test the null hypotheses at 0.05 alpha level. The finding reveled that there was a weak relationship between the use of whatsapp messenger, twitter and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria; and therefore showing no significance. More so, the finding revealed that there was a moderate relationship among the use of YouTube instagram and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria. Based on the findings, it was recommended amongst others that students should be encouraged to make adequate use of Whatsapp to model worthwhile behaviours and activities posted on the platform instead of using it for frivolities that will increase their chances of being depressed/oppressed.

Keywords: Social Network Sites, Depression, Whatsapp messenger, Twitter, YouTube, Instagram

Introduction

It is not uncommon to find many adolescents feeling sad and down for a number of reasons different from adults. For example, some of them might feel sad because of their non performance in school or for failing examinations. Some might have experienced strained romantic relationship or lost a parent, friend or a loved one.

They might also feel disappointed and lose interest in activities they once found pleasurable. In some instances when adolescents are sad or withdrawn emotionally and socially, their parents or teachers might think they are simply playing some pranks or just acting out poor behaviour for a purpose while in actual sense, the adolescent might be suffering from depression.

Depression is described as a mood disorder that lies on one extreme of mood or affect and characterized by lowered self-esteem, changes in sleep pattern, changes in appetite or weight and inability to control emotions such as pessimism, anger, guilt, irritability and anxiety (American Psychiatric Association (APA), 2013; Krucik, 2013; Smith, Saisan & Segal, 2014). Researchers at the Black Dog Institute (2012) have also identified some other signs of depressive mood to include varying emotions throughout the day, reduced capacity to experience pleasure (that is, inability to enjoy what one used to enjoy in the past), reduced pain tolerance for minor aches and pains, changed sex drives, poor concentration and memory, reduced motivation to carry out usual tasks and lowered energy level.

The number of adolescents experiencing these symptoms of depression and even depression seems to be on the increase across the world despite its devastating effects. Depression is widely acclaimed as potentially life threatening and Adeniyi, Okafor and Adeniyi (2012) warned that it might rank second after heart diseases worldwide by the year 2020 as a killer disease. In other words, given the nature of depression, its signs and symptoms, it could impact negatively on their development socially, physically and emotionally. For example, depression could be attributable to the changes in their emotions, their ability or inability to interact with their peers and even their school performances. Adolescents who are depressed might be at increased risk of having problems with school work and not getting along well with their teachers, peers and parents. They might even develop decreased interest and involvement in most of their daily activities and responsibilities. Depressed adolescents might also manifest increased health complaints such as headaches, fatigues, general weakness of the body, abdominal pains, among others. Attempt by some of them to get out of the blue might make some of them to turn to risky internet sites and blogs for help which might promote substance abuse, unsafe sexual practices, aggressive or self-destructive behaviours that might impact negatively on their health.

One must not forget in a hurry that the period of COVID-19 was a period where virtually all physical activities were shutdown worldwide for a while; thus affecting human irrespective of nationality, level of education, income and gender. The period of COVID-19 was characterized as a period of where most people's daily activities were online-based and thus an increase in the use of social media

platforms most especially for engaging their leisure time. It is important to note that the adolescents' use of social media during the period of COVID-19 occurs simultaneously with their development while developing identity, emerging physical sexual characteristics and moral consciousness (Reagan, Folakemi & Babatunde, 2020). This period has increased male and female adolescents' use of cell phones to call and more access to internet to engage in social networking sites facebooks, e-mails, twitter, whatsapps, instagrams, video games, among others (Reagan et al., 2020). This therefore increases information gathering and level of indiscriminate communication among in-school adolescents in tertiary institutions in Anambra State.

The social networking site according to Webopedia.com is defined as the phrase used to describe any web site that enable users to create public profiles within that web site and form relationships with other users of the same web site who access their profile. In the same vein, Boyd and Ellison (2007) described this type of site as one web-based service that allow semi-public profile within a bounded system, to articulate a list of other users with whom they share a connection, and view and traverse their list of connections and those made by others within the system. Agosto and Abbas (2010) look at social networking site as communication tools where youths reason together and keep in touch with one another. The different platforms of social networking sites or channels include Facebook, Twitter, YouTube, Instagram, 2go, Google messenger, Whatsapp messenger, etc.

Whatsapp messenger is a social networking platform where an individual registers and become able to access and upload videos, pictures, write articles, send and receive messages. It is universal and for all type of internet accessible phone. It is for all ages and easy to operate. It is free, promotes and facilitates interaction between friends, family and colleagues. With this Eler (2012) opined that whatsapp is an accepted means of communication which users use to write short update on their lives.

Twitter is an online social networking service and micro blogging service that enables its users to send and read text-based messages of up to 140 characters, known as 'tweets. Its platform is widely used as it has become one of the ten most visited websites on the internet that is "the SMS of the internet" .(<http://en.m.wikipedia.org/wiki/twitter>). McArthur and Bostedo – Conway (2012) in a quantitative study reported significant positive correlations between students' Twitter use and learning. They have recommended the use of Twitter for teacher- student interactions and lifelong learning experiences. Although not all phones can access the twitter due to its high technicality, Radio stations,

Television Stations, Newspaper vendors and large companies benefit from the platform. Its messages can be received as a text message if the user opted for it. Through twitter, prominent events like world cup, elections of countries musical concerts or even marriage or death of celebrities are made known quicker than any other means of communication.

YouTube is a kind of social media platform where personal videos are downloaded and shared. This media provides for unedited stories. Although it is complex to operate but it has a wider coverage. Individuals can acquire skills like make-up, bead-making, hat-making, cooking, shoe-making, interior decorations, Tie-dye and other vocational activities. The steps or procedures are shown also.

Instagram is a kind of platform that is basically used for posting pictures and videos. Although it is of a brief coverage, individuals use it as means of advertising their products through on-line shops. It brings people together in a page especially students groups. It also gives news update; people can also watch observe new trends of fashion, technology, etc.

Social media networks are designed for the purpose of communal connections. Today's students are accessing Facebook, Twitter and even Instagram to connect and share with those around them (Baker, 2013). One of the most interesting things about social media is that users can interact and engage with each other solely through a Web presence, perhaps never even meeting in person.

One must not forget that social media network therefore is a powerful tool that provides the adolescents with the powerful means of understanding themselves and their environment to enhance their personal development. They access online information on many issues without any hindrance. Apart from the apparent benefits derived from these social media, their limited capacity for self-regulation could make the adolescent at some risks as they increase their use. While the benefits of the internet are well known, the relationships between the use and adolescents' mental health have been a source of concern to researchers (Michael & Michael, 2011). Studies conducted by Lam and Peng (2010) revealed that students with depressive symptoms used the internet much more than those without symptoms. Excessive online video viewing (Langley, 2010), social networking (Michael & Michael, 2011), late-night Internet use and online chatting (Bonetti, Campbell, & Gilmore, 2010) have also been associated with symptoms of depression among young people. With excessive internet use, researchers have found out that students replace real-life interactions with online socializing, leading to increased social rejection, cyber-bullying, depression, exposure to inappropriate content, social isolation and other negative consequences

(Valkenburg & Peter, 2009; Stevens & Morris, 2010; O’Keefee, Clarke-Pearson, and Council on Communication and Media, 2011).

In a study to find out the association between media use in adolescence and depression in young adulthood, it was discovered that large amounts of advertising which are usually promoted on social media could impact on the mental health of the adolescents. This is because the contents most often present adolescents with unattainable images, role models that exhibit high degrees of risk taking behaviours, stereotypical characters that may affect self-image and anxiety-provoking shows, are potential contents that can lead adolescents to depression (Primack, Swanier, Georgiopoulos, Land, & Fine, 2009).

Statement of the Problem

Social networking sites have been reported to be associated with a number of psychological and disorders including anxiety disorders, shyness, personality disorders and depression among young people including university undergraduates (Bernadi and Pallanti, 2009; Saunders and Chester, 2008). Other researchers found that internet addiction increases the risk of depression among adults and it associated with depression and suicide among adolescents (Shaw and Gant, 2002; Ozgul, Ozlem, Alaettin and Ozalp, 2013). Meanwhile, the researcher’s experiences and interaction with some youths during the course of counselling seems to show that some of the adolescents have symptoms of depression. Would in-adolescents in tertiary institutions in Anambra State manifest symptoms of depression? Would this be associated with the use of social media as found with some adolescents in the advanced countries of Europe and America? And if this can be affirmed, what is the counselling implication?

Research Questions

The following research questions guided the study;

1. What is the relationship between the use of whatsapp messenger and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria?
2. What is the relationship between the use of twitter and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria?
3. What is the relationship between the use of youtube and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria?
4. What is the relationship between the use of instagram and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria?

Hypotheses

The following null hypotheses were tested at 0.05 alpha level:

1. There is no significant relationship between the use of whatsapp messenger and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria
2. There is no significant relationship between the use of twitter and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria
3. There is no significant relationship between the use of youtube and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria
4. There is no significant relationship between the use of instagram and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria

METHODS

This study used the correlational survey research design. The population of this study comprised all the 21,223 male and female undergraduates in the two public universities in Anambra State. The sample size of this study consist of 525 undergraduate university students in Anambra State. The multi-stage sampling technique was employed in this study. In stage one, simple random sampling technique was used to draw one faculty each from Chukwuemeka Odumegwu Ojukwu University and Nnamdi Azikiwe University, Awka. In stage two, simple random sampling technique was used to draw two departments (Department of Educational Foundations and Department of Banking and Finance) each from each of the faculties in the two universities in Anambra State. In stage three, 300 level and 400 level students were randomly selected from each of the departments. From this stage, all 300 level and 400 level undergraduate in the selected departments formed the sample size of this study. Therefore, 525 undergraduate university students formed the sample size of this study.

Five self-designed instruments of whatsapp Use Scale (WUS), Twitter Use Scale (TUS), YouTube Use Scale (YUS), Instagram Use Scale (IUS) and Depression Tendencies Scale (DTS) were used for data collection. The instrument used has two sections, A and B, Section A consists of the Demographic factors while section B embraces Non-cognitive and Non-standardized 50 items. The self-designed instruments were structured after modified Likert four-points relating to rating scales of Strongly Agree (4-points), Agree (3-points), Disagree (2-points), and Strongly Disagree (1-point). Face and content validities were rightly ensured to make sure that the instrument measures what it ought to measure. Also, to

determine the internal consistency of the instrument, Cronbach Alpha was used and an overall co-efficient of 0.87 was obtained. Pearson Product Moment Correlaiton co-efficient was used to answer the research questions while the linear regression was used to test the null hypotheses at .05 alpha level.

RESULTS

Research Question 1: What is the relationship between the use of whatsapp messenger and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria?

Hypothesis 1: There is no significant relationship between the use of whatsapp messenger and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria

Table 1: Test of Significant relationship the use of whatsapp messaenger and depression tendencies amongst in-school adolescents in tertiary institutions
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.0403 ^a	.162	.154	.68883	.001	.019	1	516	.011

a. Predictors: (Constant), whatsapp messenger

b. Dependent Variable: depression tendencies

Data presented in table 1 revealed that the r value of 0.403 means that there was a weak relationship between the use of whatsapp messenger and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria. Also, the data revealed that the p-value of 0.011 is greater than the alpha level of .05, this means that the null hypothesis was accepted ($F(1,516) = 0.011$, $p < 0.05$). Thus, there is no significant relationship between the use of whatsapp messenger and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria.

Research Question 2: What is the relationship between the use of twitter and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria?

Hypothesis 2: There is no significant relationship between the use of twitter and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria.

Table 2: Test of Significant relationship the use of twitter and depression tendencies amongst in-school adolescents in tertiary institutions

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.329 ^a	.108	.103	.64267	.130	2.701	1	516	.018

a. Predictors: (Constant), Twitter

b. Dependent Variable: depression tendencies

Data presented in table 2 revealed that the r value of 0.329 means that there was a weak relationship between the use of twitter and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria. Also, the data revealed that the p-value of 0.018 is greater than the alpha level of .05, this means that the null hypothesis was accepted ($F(1,516) = 0.018, p < 0.05$). Thus, there is no significant relationship between the use of twitter and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria.

Research Question 3: What is the relationship between the use of youtube and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria?

Hypothesis 3: There is no significant relationship between the use of youtube and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria.

Table 3: Test of Significant relationship the use of Youtube and depression tendencies amongst in-school adolescents in tertiary institutions

Model Summary ^b									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.454 ^a	.206	.316	.68718	.006	.106	1	516	.051

a. Predictors: (Constant), YouTube

b. Dependent Variable: Depression tendencies

Data presented in table 3 revealed that the r value of 0.454 means that there was a moderate relationship between the use of YouTube and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria. Also, the data revealed that the p-value of 0.051 is greater than the alpha level of .05, this means that the null hypothesis was accepted ($F(1,516) = 0.051, p < 0.05$). Thus, there is no significant relationship between the use of YouTube and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria.

Research Question 4: What is the relationship between the use of instagram and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria?

Hypothesis 4: There is no significant relationship between the use of instagram and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria

Table 4: Test of Significant relationship the use of instagram and depression tendencies amongst in-school adolescents in tertiary institutions

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.528 ^a	.278	.274	7.68592	.278	66.229	3	515	.000

a. Predictors: (Constant), Instagram

b. Dependent Variable: Depression Tendencies

Data presented in table 4 revealed that the r value of 0.528 means that there was a moderate relationship between the use of instagram and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria. Also, the data revealed that the p-value of 0.000 is greater than the alpha level of .05, this means that the null hypothesis was accepted ($F(1,516) = 0.000, p > 0.05$). Thus, there is significant relationship between the use of instagram and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria.

Discussions of Findings

The findings of the study have shown that there was a weak relationship between the use of whatsapp messenger and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria. The finding also revealed there is no significant relationship between the use of whatsapp messenger and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria. This means that the use of whatsapp messenger is a good social media platform for reducing depression tendencies amongst in-school adolescents. With the use of the application in uploading photos, videos and write ups on status, it plays a crucial role in growing their intellect and also enhances creativity in them. In support of this, Clark and Roberts (2010), Dewyer, Hiltz and Passerni (2007), are all of the opinion that social networking sites or channels like whatsapp is a positive change to the development of its members.

The finding also revealed that there was a weak relationship between the use of twitter and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria. Also, there is no significant relationship between the use of twitter and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria. Twitter as a social

network website allows users to publish short messages that are visible to other users. It could be in form of communication between friends and family, a way to publicize events or as a customer relations tool. All these can be extended to the teaching and learning process as McArthur and Bostedo-Conway (2012) earlier noted that this media has significant positive correlations between students' Twitter use and learning. Krishna (2015) noted also that it is a pedagogical tool and so needed in the teaching learning process

The finding revealed that there was a moderate relationship between the use of twitter and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria. Also, there is no significant relationship between the use of YouTube and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria. Twitter as a social network website allows users to publish short messages that are visible to other users. It could be in form of communication between friends and family, a way to publicize events or as a customer relations tool. All these can be extended to the teaching and learning process as McArthur and Bostedo-Conway (2012) earlier noted that this media has significant positive correlations between students' Twitter use and learning. Krishna (2015) noted also that it is a pedagogical tool and so needed in the teaching learning process.

More so, the finding revealed that there was a moderate relationship between the use of instagram and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria. Also, the data revealed that the p-value of 0.000 is greater than the alpha level of .05, this means that the null hypothesis was accepted ($F(1,516) = 0.000, p > 0.05$). Thus, there is significant relationship between the use of instagram and depression tendencies amongst in-school adolescents in tertiary institutions in Anambra State Nigeria. This platform is basically used for positing pictures and videos. It bring people together in pages especially students group. It gives news update as people can also observe. Here people observe new trends of fashion, technologically. Users also have the option of making their profile private so that only their followers can view their posts. Instagram adds live-video functionality to stories. These has made Instragram's popularity to be described as that which has sparked an engaging community including dedicated trends (Instagram Wikipedia <https://en.wikipedia.org/wiki/Instagram>).

Conclusion

Social networking sites have positively affected the society especially during the COVID-19 era. Correct use of features and opportunities of social networking sites

supports students' educational process with active and lifelong learning, creativity, problem solving, cooperation and multifaceted interaction and critical thinking and in turn addresses depression tendencies. From the findings of the results of this study, it is concluded that social networking sites/channels (Whatsapp, Instagram, YouTube and Twitter have a high positive relationship with depression tendencies. This clearly shows that an increase recorded in the independent variables eventually leads to increase in the dependent variables indicating a positive correlation between depression tendencies and social networking sites.

Recommendations

From the findings of the study, this work recommends that:

- a. Students should be encouraged to make adequate use of Whatsapp to model worthwhile behaviours and activities posted on the platform instead of using it for frivolities that will increase their chances of being depressed/oppressed.
- b. There is need for conferences and workshops to be organized by internet specialists on the competent use of some social networking sites by teachers and students. This will enhance attainment of learning objectives and have a high tendency of reducing depression.
- c. Students should be exposed and taught how to use various social media channels especially YouTube from young age to enhance easier access and adequate benefit that could in turn reduce depression.
- d. Counselling interventions should readily be made available in schools, like cognitive behaviour therapy, rational emotive behaviour therapy, interpersonal therapy, psychodynamic therapy and hopelessness theory of depression, which have been found helpful in preventing, reducing and managing depression and depressive symptoms among adolescents, must be adopted and made available for the adolescents' well-being.

REFERENCES

- Adeniyi, A. F., Okafor, N. C., & Adeniyi, C. Y. (2012). Depression and physical activity in a sample of Nigerian adolescents: levels, relationships and predictors. *Child Adolescent Psychiatry Mental Health*, 5, 16. doi:10.1186/1753-2000-5-16 www.ncbi.nlm.nih.gov/m/pubmed/21569581. Retrieved on 28/7/2013.
- Agusto, D. E., & Abbas, J. (2010). Higher School Seniors' Social Network and other ICT use preferences and concerns. *Proceedings of the American Society for Information Science and Technology*. 47(1), 1-10.
- American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders* (5th ed). Arlington, VA: American Psychiatric Publishing.

- Baker, J. (2013). How students benefit from using social media. Retrieved 6th December, 2017 from www.edudemic.com/how-student-benefit-from-using-social-media.
- Bernadi, P., & Pallanti, S. (2009). Internet addiction: A descriptive clinical study focusing on co-morbidities and dissociative symptoms. *Comprehensive Psychiatry*, 5, 510 – 516.
- Bonetti, L., Campbell, M. A. & Gilmore, L. (2010). The relationship of loneliness and social anxiety with children's and adolescents' online communication. *CyberPsychology, Behaviour, and Social Networking*, 13(3), 279–285.
- Boyd, D. & Ellison, N.O. (2007). Social network sites: Definition, history and scholarship. *Journal of Computer-Mediated Communication*. 13(1) 210-230.
- Clark, L.A., & Roberts, S.J., (2010). Employers' use of social networking sites. A socially irresponsible practice *Journal of Business Ethics*, 95(4): 507.
- Dewyer, C., Hiltz, S. R., & Passerini, K., (2007). *Trust and privacy concern within social networking site: Comparison of facebook and myspace*. AMCIS 2007 Proceedings Paper 339 NY.
- Eler, A. (2012). Why do people use Facebook? <http://readwrite.co,2012/10/16/studyWhydopeopleusefacebook>.<http://en.wikipedia.org/wiki/twitter>.Instagram -Wikipedia
<https://en.wikipedia.org/wiki/Instagram>
- Krishna, B. (2015). *Is twitter an effective pedagogical tool in higher education? Perspectives of Education?* Perspectives of Education Graduate Students
- Krucik, G. (2013). What do you want to know about depression? www.healthline.com/health/depression. Retrieved on 10/10/2014.
- Lam, L. & Peng, Z. (2010). Effect of pathological use of the internet on adolescent mental health. *Archives of Pediatrics & Adolescent Medicine*, 164(10), 901-906. Doi: 10.1001/archpediatric. 159. 2010.
- Langley, A. (2010). *Correlates of video game addiction*. MSc thesis, University of North Texas. http://digital.library.unt.edu/ark:/67531/metadc33181/m2/1/high_res_d/thesis.pdf. 15/12/2014.
- McArthur, J.A & Bostedo-Conway, K. (2012). Exploring the relationship between student in structure interaction on Twitter and student perception of teachers behavior.
- Michael, M. E. & Michael, K. (2011). The fall-out from emerging technologies: on matters of surveillance, social networks and suicide. *IEEE Technology and Society Magazine*, 30(3)9, 15-18.
- O'Keeffe, G. S., Clarke-Pearson, K., & Council on Communications and Media (2011). The impact of social media on children, adolescents, and families. *Paediatrics*, 127, 800-804. doi: 10.1542/peds.2011-0054.
- Ozgul, O., Ozlem, O., Alaettin, U., & Ozalp, S. S. (2013). Evaluation of internet addiction and depression among university students. *Procedia-Social and Behavioural Sciences*, 82, 445 – 454.

- Primack, B. A., Swanier, B., Georgiopoulos, A. M., Land S. R. & Fine, M. J. (2009). Association between media use in adolescence and depression in young adulthood: A longitudinal study. *Archive of General Psychiatry*, 66,181-188. Doi:10.1001/archgenpsychiatry.2008.532. www.ncbi.nlm.nih.gov. retrieved 5/11/2014
- Reagan, Y. P., Folakemi, O., & Babatunde, S. (2020). The impact of COVID-19 pandemic on learning and academic libraries in Nigeria. *International Journal of Research and Innovation in Social Science*, 4(10), 538 – 542.
- Saunders, P., & Chester, A. (2008). Shyness and the internet: Social problems or panacea? *Computer in Human Behaviour*, 24, 2649 – 2658.
- Shaw, L. H., & Gant, L. M. (2002). In defence of the internet: The relationship between internet communication and depression, loneliness, self-esteem and perceived social support. *Cyber Psychology and Behaviour*, 5(2), 157 – 171.
- Smith, M., Saisan, J. & Segal, J. (2014). *How to recognize depression and get effective help*. Help Guide. Org. www.m.helpguide.org/articles/depression/depression-symptoms-and-warning-signs. Retrieved on 16/11/2014
- Stevens, S. B. & Morris, T. L. (2010). College dating and social anxiety: Using the Internet as a means of connecting to others. *CyberPsychology & Behavior*, 10(5), 680-688. www.traci_morris.psychology.wvu.edu/r/download/109800.pdf. Retrieved on 1/2/2015.