

## **COGNITIVE RESTRUCTURING INTERVENTION FOR REDUCING SOCIAL MEDIA ADDICTION AMONG IN-SCHOOL ADOLESCENTS IN NSUKKA EDUCATION ZONE: IMPLICATIONS FOR BEHAVIOURAL REFORM**

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### **Abstract**

The study explored the impact of cognitive restructuring intervention on reducing social media addiction, specifically focusing on WhatsApp addiction, among in-school adolescents in the Nsukka education zone. A quasi-experimental non-equivalent pre-test post-test control group research design was employed for the study. The population of interest consisted of 115 secondary school students from two public secondary schools in the area. A sample of 115 students (55 males and 60 females) from secondary school II was used. The study utilized the WhatsApp Addiction Scale (TWAS) to collect data, which was validated by three experts and had a Cronbach alpha reliability of 0.87. The research questions were answered using mean and standard deviation, while the null hypotheses were tested using analysis of covariance (ANCOVA). The study's findings indicated that cognitive restructuring was effective in reducing WhatsApp addiction among students. The moderating effect of gender on the impact of cognitive restructuring treatment on in-school adolescents' WhatsApp addiction levels was not significant. Based on the study's findings, it is recommended that counsellors incorporate cognitive restructuring in reducing WhatsApp addiction among in-school adolescents. Furthermore, both male and female students addicted to WhatsApp should be exposed to cognitive restructuring equally, as they benefit equally from such exposure. It was also recommended among others that parents should endeavour to monitor and regulate the use of WhatsApp.

**Keywords:** Social media, WhatsApp, Addiction, in-school adolescents, behaviour reform.

### **Introduction**

The advent of the internet in the 1990s revolutionized communication, leading to the emergence of social media platforms and applications. These digital spaces have transformed various aspects of life, from education to entertainment. However, concerns have arisen globally regarding the extent of social media usage and its impact on young individuals, particularly as children born post-1990s are considered digital natives, deeply intertwined with technology in their daily lives (Griffiths & Kuss, 2017). Social media encompasses diverse platforms facilitating communication, including forums, blogs, social networks, and multimedia sites, with popular examples like Facebook, WhatsApp, Instagram, Telegram, Snapchat, and MySpace. Scholars have defined social media in various ways, such as internet-based applications enabling user-generated content exchange (Kaplan & Haenlein, 2010) and interactive platforms leveraging web technologies for content creation and sharing (Kietzmann et al., 2011). The nature and nomenclature of these connections may vary from site to site (Boyd & Ellison, 2008) and possess huge potential for addictive behaviour.

It is easily observed that social media usage can be addictive, especially among younger demographics. Addiction is characterized by repetitive habit patterns that increase the risk of disease and/or associated personal and social problems. In this context, addiction is seen as any behaviour that continues to occur despite volitional attempts to abstain or moderate it. Addictions can involve physical substances like drugs or alcohol, as well as abstract things like gambling, internet, social media, and seemingly harmless products such as chocolate. Over the

last decade, addictive behaviours have become a part of adolescents' lives, with excessive use of social media applications being a primary concern. This is largely enabled by the spike in access to smartphones and similar mobile devices. Social media addiction is seen as the excessive use of social media platforms to the extent that it interferes with individuals' normal routines and functions. Researchers, parents, school teachers, and counsellors in the Nsukka education zone have repeatedly expressed concern about the observed excessive use of social media by in-school adolescents and its impact on their academic achievement.

In addition to the negative impact on academic performance, social media addiction also has detrimental effects on the psychological health of in-school adolescents, causing behavioural disorders such as depression, anxiety, and mania (Azizi et al., 2019). Parents have also reported unsocial behaviours resulting from social media addiction, such as isolation from family members, neglect of chores and responsibilities, and sleep deprivation to stay up chatting with online friends. These behaviours lead to a lack of social skills, poor interpersonal relationships, and general social maladaptiveness towards parents, teachers, and family members. A survey among adolescents, parents, and teachers reveals that some social media applications, particularly WhatsApp, are more prominent among young people in Nigeria. These platforms do not require special access, and virtually anyone with an internet-enabled device is registered on them. This research work will focus on the addiction of in-school adolescents to one of these more popular social media platforms, WhatsApp. WhatsApp addiction is negatively associated with students' academic performance and can have more significant consequences than its advantages. Studies have shown that WhatsApp addicts devote less time to their studies compared to non-addicts, resulting in lower GPAs (Mandelbaum, Rumelt, Wein, & Vidair, 2024; Moqbel, Alshare, Erskine, & Bartelt, 2023; Moretti et al., 2023; Kirschner & Karpinski, 2010). WhatsApp addiction can also disrupt sleep patterns, with people scoring high on addiction scales reporting delayed bedtimes and rise times on both weekdays and weekends compared to those with lower addiction scores (Andreassen et al., 2012).

WhatsApp is a mobile application used for instant messaging, replacing traditional phone short messages (SMS) due to its capacity to send large volumes of messages and media files. Introduced in 2009, WhatsApp has become one of the most popular social media applications used by young people for communication (Fawzi, 2015). Its free facility to exchange text, photos, videos, forward jokes, and other information easily results in excessive use (Faye et al., 2016). The impact may cause users to lose interest in the real world, with their entire emotion remaining restricted to the application on their phone. Symptoms of WhatsApp addiction include loss of control, serious interference in everyday life (at school or work), and constant dependence (Faye et al., 2016). WhatsApp, like Facebook, has been observed to negatively impact young individuals, particularly adolescents. One explanation for this is that WhatsApp provides excessive stimulation, leading adolescents to prioritize online interactions over developing healthy relationships with family members and classmates. The captivating nature of the platform, offering features like chats, audio & video calls, and status updates, can result in adolescents neglecting real-world interactions. This preoccupation with social media can lead to social ineptitude and maladjustment, affecting their social skills and relationships. Additionally, WhatsApp addiction among school adolescents has been linked to academic underperformance, with students exhibiting failures and poorer exam scores due to excessive use of the platform (Shahibi & Rusli, 2017). This addictive behaviour can interfere with academic work and social lives, posing a significant challenge to adolescents' overall well-being and academic success.

Adolescents, defined as individuals between the ages of 11 and 18 who are currently in secondary schools, are a unique age group undergoing various developmental changes that can influence their susceptibility to social vices such as addictions (Wang et al., 2017). Given the

negative effects of WhatsApp addiction on secondary school adolescents, there is a pressing need for remedies to address this issue and its devastating impact on the future generation. Counselling, a helping process in which professionals assist clients in discussing and finding solutions to their problems, employs behaviour modification techniques to address issues like aggression, addictions, phobias, shyness, and poor study habits (Banneyer, Bonin, Price, Goodman, & Storch, 2018). Among these techniques, cognitive restructuring has been identified as particularly effective in changing behaviours related to phobias and addictions (Clark, 2014). Cognitive restructuring involves learning to refute negative interpretations and replace irrational beliefs with more accurate and beneficial ones (Osarenren & Ajaero, 2013). By applying this therapeutic technique, social media-addicted students can recognize and replace the negative values, beliefs, attitudes, and practices associated with their social media use, potentially mitigating the adverse effects of addiction on both male and female in-school adolescents.

Another factor that can influence social media addiction is gender. Gender refers to the socially constructed roles, behaviours, activities, and attributes that a particular society considers appropriate for men and women (World Health Organization, 2014). While there are contradictions regarding the influence of gender on social media use, with some studies indicating higher addiction rates in males and others highlighting higher rates in females, gender roles on social networking sites often mirror the expectations of the societies that users represent (Choudhury & Ali, 2020). Understanding the relationship between gender and social media addiction can provide valuable insights into developing targeted interventions and support strategies for adolescents of different genders. Initial observations of WhatsApp usage among in-school adolescents in the Nsukka Education Zone reveal a concerning trend of excessive use, particularly among senior secondary school students. Instances were noted where students engaged in online chats during class, prompting teachers to confiscate smartphones or ask students to leave. This escalating issue is fuelled by the increasing smartphone ownership among adolescents, leading to detrimental effects such as academic decline. The pervasive addiction to social media not only impacts academic performance but also disrupts family dynamics, as adolescents spend significant time engaging with virtual friends, some of whom may influence them towards deviant behaviour. Financial implications are also evident, with some diverting funds meant for educational purposes to sustain their online connectivity, highlighting the urgent need for effective strategies to address WhatsApp addiction among in-school adolescents in the Nsukka Education Zone.

The sight of adolescents engrossed in phone chats in various settings like religious institutions and educational venues is becoming increasingly common, with some even risking accidents due to distracted walking. The proliferation of sophisticated cell phones has further divided students' attention, diverting focus from academic pursuits to online interactions via platforms like Facebook and WhatsApp. This shift towards virtual connections over tangible relationships poses a significant concern for parents and educators, as academic performance suffers, potentially jeopardizing educational progress and increasing the risk of dropping out. In addition to academic challenges stemming from social media addiction, parental concerns arise from adolescents prioritizing online interactions over family time. Even after school hours, adolescents retreat to online spaces like WhatsApp, isolating themselves from real-world interactions and potentially fostering antisocial behaviours. This withdrawal from offline activities can lead to social ineptitude and maladjustment over time, raising concerns about the long-term impact on societal behaviour and well-being.

## **Statement of the Problem**

Importantly, it appears that different counselling strategies such successive approximation and reinforcement have been used in an attempt to reduce WhatsApp addiction among in-school adolescents, but they have not been very effective as they are still addicted to these behaviours. This situation is worrisome especially when one realizes that there is presently no treatment option that is specifically targeted towards in-school adolescents that are addicted to WhatsApp social media platforms in this Nsukka Education Zone. This is often as a result of the underestimation of the impact that WhatsApp addiction has on students or lack of knowledge of techniques that can help teachers, counsellors, and psychologists to deal with it. In view of these devastating effects of WhatsApp addiction among secondary school students in Nsukka Education Zone of Enugu State, it became necessary that urgent steps, using behaviour modification techniques be used to reduce such addiction. The researcher has chosen to use Cognitive Restructuring to remediate WhatsApp addiction among in-school adolescents. Against this backdrop, the problem of this study is, what are the effects of cognitive restructuring on WhatsApp addiction among in-school adolescents in Nsukka Education Zone in Enugu state.

### **Objective of the Study**

This study investigated the effect of cognitive restructuring on social media addiction among in-school adolescents in Nsukka Education Zone, Enugu State. Specifically, this study sought to;

1. determine the effect of cognitive restructuring on WhatsApp addiction among in-school adolescents.
2. ascertain the effect of cognitive restructuring treatment on WhatsApp addiction among in-school adolescents as moderated by gender.

### **Hypotheses**

The following null hypotheses were formulated and tested at 0.05 level of significance.

**H<sub>01</sub>:** There is no significant difference in the mean ratings of in-school adolescents exposed to cognitive restructuring on WhatsApp addiction and those not so exposed.

**H<sub>02</sub>:** There is no significant difference in the mean ratings of in-school adolescents exposed to cognitive restructuring on WhatsApp addiction as moderated by gender.

### **Literature review**

#### **Studies related to WhatsApp Addiction**

Several studies have been carried out on WhatsApp addiction, among such studies, Sampath et al., (2018) found that 12% of undergraduate medical students in India qualified for WhatsApp dependence/addiction. Students with WhatsApp dependence had significantly higher scores on dimensions like salience, mood modification, tolerance, withdrawal, conflict, and relapse. Singh et al., (2019) revealed that 54% of medical students in India felt their concentration was reduced due to WhatsApp use, 43.6% experienced eye strain, and 38.4% perceived a reduction in physical activity. However, Hamu et al., (2019) showed that cognitive commitment behavioural therapy (CCBT) had a positive effect on lowering the level of WhatsApp addiction among adolescents in Kupang City, Indonesia. In like manner, Hou et al. (2019) found that WhatsApp addiction was negatively associated with college students' mental health and academic performance in China. A two-stage self-help intervention program effectively reduced WhatsApp addiction and improved mental health and academic efficiency. Badola et al. (2021) study revealed that 58.8% of students in a private university in Delhi-NCR, India, were addicted to WhatsApp. Checking WhatsApp immediately after waking up and in the middle of sleep was significantly associated with WhatsApp addiction. These studies consistently demonstrate the prevalence of WhatsApp addiction among students in various

educational settings, with significant negative impacts on their mental health, academic performance, and daily functioning. The findings highlight the need for interventions to address this emerging behavioural addiction. More so, to the best of the researchers' knowledge, such intervention has not been provided in Nsukka education Zone Enugu state, hence the necessity of this study.

### **Studies Related to Cognitive Restructuring**

The empirical studies reviewed here provide insights into the efficacy of cognitive restructuring interventions in addressing various behavioural issues, including social media addiction. These studies demonstrate the effectiveness of cognitive restructuring in reducing the severity of these behavioural problems and improving overall well-being. Irwayanti (2019) conducted a study on the effect of cognitive restructuring counselling technique on reducing students' social media usage intensity. The study used a quasi-experimental design and found that the implementation of cognitive restructuring technique significantly reduced the intensity of social media usage among students. Oguzie, Ani, Obi and Onyegirim (2018) and Anyamene, Nwokolo, and Onyeukpere (2021) conducted studies on the effect of cognitive restructuring technique on cell phone addiction and internet addiction, respectively. Both studies used quasi-experimental designs and found that cognitive restructuring was significantly effective in reducing cell phone addiction and internet addiction among secondary school students. The studies by Sabbah et al. (2019) and Wahyuni and Maksum (2019) focused on the incidence of social media addiction among university students in Lebanon and college students in Indonesia, respectively. Both studies used cross-sectional designs and found that gender played a significant role in moderating the relationship between self-esteem and social media addiction. Gaja and Selvaraj (2020) conducted a study on gender differences in social media addiction among adolescent students in India. The study used a cross-sectional design and found that male students were more addicted to social media than female students. The empirical studies reviewed here demonstrate the effectiveness of cognitive restructuring interventions in addressing various behavioural issues, including social media addiction but not specifically WhatsApp. These studies highlight the importance of considering factors such as gender and socioeconomic status in the design and implementation of cognitive restructuring interventions. Therefore, the researchers speculated that the intervention would be effective for reducing WhatsApp addiction.

### **Studies Related to Gender and Social Network Addiction**

The empirical studies reviewed here provide insights into the incidence of social media addiction among university and college students, as well as the moderating role of gender in this relationship. Sabbah et al. (2019) conducted a cross-sectional study among 705 university students in Lebanon to assess the prevalence of technology addiction using the Media and Technology Usage and Attitudes Scale (MTUAS). The study found that male students had a higher risk of addiction to social media and technology compared to females. It also revealed that technology addiction had an impact on students' academic performance and overall well-being. Wahyuni and Maksum (2019) examined the effect of self-esteem on social media addiction among 225 college students in Indonesia, with gender as a moderator. The results showed that gender significantly moderated the relationship between self-esteem and addictive behaviour on social media. Descriptive analysis indicated that social media addiction behaviour scores were higher among female students compared to male students. While Sabbah et al. (2019) and Wahyuni and Maksum (2019) found higher addiction rates among male and female students, respectively, Gaja and Selvaraj (2020) reported higher addiction among male students. These differences may be attributed to cultural and contextual factors. The studies emphasize the need for interventions to address social media addiction among students,

considering gender-specific factors. Hence, the researchers on took cognizance of gender as the moderating to see the effect of cognitive restructuring on the WhatsApp addiction of in-school adolescents' in Nsukka Education Zone.

## **Materials and Method**

### ***Design***

The design of the study is quasi-experimental specifically, non-equivalent pretest posttest control group design, which is a research design in which the same dependent variable is measured in one or more groups of participants before (pretest) and after (posttest) a treatment is administered. The rationale for the use of quasi-experimental pretest posttest control group design for this study is because it involves human behaviour and does not permit complete randomization of subjects and control of all variables (Nwogu, 2015). The design is often used in classroom experiments when experimental and control groups are assembled as intact classes and no possibility of randomization. Hence, intact classes were used and there was no random assignment of research subjects into the experimental group and the control group.

### ***Participants***

The population of the study is 115 in-school adolescents. This is made up of in-school adolescents in 2 out of the 59 Public secondary schools in Nsukka Education Zone who showed high level of addiction to social media. Nsukka Local Government Area, has 30 secondary schools. Uzo-uwani Local Government Area, has 14 secondary schools; while Igbo-Etiti Local government area has 15 secondary schools (Post Primary School Management Board, Nsukka Education Zone, 2021). The choice of secondary school students is to ensure that the subjects that constituted the population have reached adolescent stage and have exhibited adolescent characteristics.

### ***Procedure***

The study was carried out in three stages at different locations in each of the selected schools and lasted for eight weeks, thus: Stage 1: Pre – test Stage 2: Treatment; and Stage 3: Post-test. A 6-module treatment package known as Cognitive Restructuring Intervention (CRI) programme was developed by the researcher with the help of two experts in Educational psychology. The treatment package was spread across week 2 – week7 of the experiment duration (1 module per week) while week 1 and week 8 were for entry and exit sessions respectively with the participants.

### ***Measures***

To measure WhatsApp addiction, The WhatsApp Addiction Scale (TWAS) was used. This WhatsApp Addiction Scale was adapted from the Bergen Facebook Addiction Scale (BFAS) by Andreassen et al. This WhatsApp Addiction Scale has 14 items. Each item is rated on a 5-point scale using anchors of 1=very rarely, 2 = rarely, 3=sometimes, 4= often, 5=very often. Higher scores indicate higher level of addiction.

The instruments were face validated by two experts from the Faculty of Education of the University of Nigeria, Nsukka and one expert from the Faculty of Vocational Technical Education of the University of Nigeria, Nsukka. The experts are specifically from Guidance and Counselling, Educational Measurement and Evaluation as well as Computer & Robotics Education. The validators were requested to see and vet whether the questionnaires could properly elicit responses required to provide solution to the research problem. They were asked also to confirm the suitability of the rating scale. Additionally, the experts were asked to match the contents of the questionnaires with the research questions, to check the appropriateness and adequacy of the items in the questionnaire in answering the research questions. The corrections, suggestions, inputs of the three experts were considered and included in the final copy of the questionnaire.

### Data Analytic Strategy

The data collected was arranged based on the various groups with respect to their gender. Mean and standard deviation was used to answer the research questions while Analysis of Covariance (ANCOVA) was used to test the hypotheses at 0.05 level of significance. The experimental effect size will be determined with the help of partial Eta value.

### Results

The results of this study are presented according to the research questions and hypotheses.

**Research Question 1:** What is the effect of cognitive restructuring on WhatsApp addiction among in-school adolescents?

**Table 1: The WhatsApp addiction ratings of in-school adolescents who were exposed to CR and those in the control group**

Groups	N	Pretest		Posttest		Mean loss	Mean loss difference
		Mean	Std	Mean	Std		
Experimental (CR)	30	109.00	15.43	53.27	15.14	-55.73	
Control	30	101.03	13.97	103.17	15.41	-3.36	52.37

Table 1 shows the pretest and posttest mean scores of in-school adolescents with WhatsApp addiction exposed to CR and those not so exposed. The table revealed that in-school adolescents exposed to CR and conventional method respectively at the pre-test recorded the mean scores of WhatsApp addiction of 109.00 and 101.03 and standard deviation scores of 15.43 and 13.97. However, at the post-test, the mean scores of WhatsApp addiction of 53.27 and 103.17 and standard deviation scores of 15.14 and 15.41 were obtained for experimental and control groups in favour of the experimental group. The mean score difference of 52.37 was recorded for the experimental and control groups. The result indicated that CR was effective in reducing WhatsApp addiction among in-school adolescents i.e. it has a positive effect on the addicts.

**Hypothesis 1:** There is no significant difference in the mean ratings of in-school adolescents exposed to cognitive restructuring WhatsApp addiction and those not exposed to it.

**Table 2: Summary of Analysis of Covariance (ANCOVA) of Mean of students with WhatsApp addiction of those exposed to CR and those not exposed**

Dependent Variable: posttest						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Decision
Corrected Model	44927.873 <sup>a</sup>	2	22463.937	101.987	.000	Significant
Intercept	4014.216	1	4014.216	18.225	.000	Significant
Pretetst	591.857	1	591.857	2.687	.107	Not significant
Groups	44854.914	1	44854.914	203.643	.000	Significant
Error	12554.977	57	220.263			
Total	445815.000	60				
Corrected Total	57482.850	59				

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a. R Squared = .782 (Adjusted R Squared = .774)

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Table 2 shows that treatment with CR is a significant factor on WhatsApp addiction reduction with  $F(1, 57) = 203.643, p = 0.00 < 0.05$ . Thus, the null hypothesis is rejected. Therefore, there is a significant mean difference in WhatsApp addiction of in-school adolescents exposed to CR treatment and those in control group.

**Research question 2:** What the effect of cognitive restructuring treatment on WhatsApp addiction among in-school adolescents as moderated by gender?

**Table 3:** Mean ratings of in-school adolescents exposed to cognitive restructuring on WhatsApp addiction as moderated by gender

Groups	N	Pretest		Posttest		Mean loss
		Mean	Std	Mean	Std	
Male in-school adolescents	30	110.20	16.20	53.80	17.47	-56.40
Females in-school adolescents	30	107.80	15.09	52.73	12.99	-55.07

Table 3 shows that at the pretest-test, male persons with WhatsApp addiction recorded mean value of 110.20 and standard deviation score of 16.20 while female students with WhatsApp addiction recorded mean value of 107.80 and standard deviation score of 15.09. At the post-test, male students with WhatsApp addiction have mean value of 52.73 with standard deviation score of 17.47 while female students with WhatsApp addiction have mean value of 53.80 and standard deviation score of 12.99. The results revealed that CR is effective in reducing WhatsApp addiction of male and female in-school adolescents i.e. it has a positive effect on the addicts. The reduction was slightly in the favour of male in-school adolescents than their female counterparts.

**Hypothesis 2:** There is no significant difference in the mean ratings of in-school adolescents exposed to cognitive restructuring on WhatsApp addiction as moderated by gender.

**Table 4: Summary of Analysis of Covariance (ANCOVA) of Mean of male and female students with WhatsApp addiction**

Dependent Variable: posttest						
Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Decision
Corrected Model	44999.628 <sup>a</sup>	4	11249.907	49.566	.000	Significant
Intercept	4082.071	1	4082.071	17.985	.000	Significant
Pretetst	522.778	1	522.778	2.303	.135	Significant
Groups	44751.981	1	44751.981	197.173	.000	Significant
Gender	22.905	1	22.905	.101	.752	Not significant
groups * gender	49.349	1	49.349	.217	.643	Not significant
Error	12483.222	55	226.968			
Total	445815.000	60				
Corrected Total	57482.850	59				

a. R Squared = .783 (Adjusted R Squared = .767)

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Table 4 shows that gender is not a significant factor on WhatsApp addiction reduction with  $F(4, 55) = .217, p = .643 > 0.05$ . Therefore, the null hypothesis of no significant difference in the mean WhatsApp reduction of male and female in-school adolescents is upheld since the exact probability level of .643 is greater than 0.05 level of significance. Thus, gender is not a significant factor on WhatsApp reduction of in-school adolescents.

## **Discussion**

### **Effect of Cognitive Restructuring on WhatsApp addiction among in-school adolescents**

The study revealed that, exposing in-school adolescents to Cognitive restructuring treatment can help to reduce their addiction to WhatsApp as there is a significant difference between the mean score of in-school adolescents exposed to cognitive restructuring treatment and those in the control group. This means that, exposing in-school adolescents to cognitive restructuring treatment can help to reduce their level of addiction to WhatsApp. There was also a significant effect of cognitive restructuring treatment on the WhatsApp addiction of in-school adolescents as those exposed to cognitive restructuring treatment tend to be less addicted to WhatsApp after the cognitive restructuring treatment than those in the control group not exposed to any treatment. The findings are also in agreement with that of Hamu, Yusuf, Sufyanti, Margono, Triyana & Abdul (2019) who found out that, there are positive effects of cognitive behavioural therapy on internet addiction among intervention group before and after receiving the intervention. WhatsApp is one of the many Internet services that many users get addicted to. The finding is in accordance with that of Irwayanti (2019) who found out in earlier study that, the implementation of cognitive restructuring technique can reduce the intensity of social media usage intensity.

### **The effect of cognitive restructuring treatment on WhatsApp addiction among in-school adolescents as moderated by gender.**

The study revealed that, female in-school adolescents were slightly more addicted to WhatsApp than male in-school adolescent, however, the interaction effect of cognitive restructuring and gender was more effective in reducing the level of WhatsApp addiction among female in-school adolescents than in male in-school adolescents, however slightly. The interaction effect of cognitive restructuring treatment and gender on in-school adolescents' level of WhatsApp addiction was not statistically significant. The finding is in accordance with that of Irwayanti (2019) who found out in an earlier study that, the implementation of cognitive restructuring technique can reduce the intensity of social media usage intensity, however, gender has no interaction with the effectiveness of cognitive restructuring technique on the participants.

## **Conclusion**

The study investigated the effect of cognitive restructuring on WhatsApp addiction among in-school adolescents in Nsukka Education Zone, Enugu State. Based on the findings, the study concluded that in-school adolescents in Nsukka Education Zone, Enugu State are highly addicted to WhatsApp. It was also concluded that, cognitive restructuring treatment has significant positive effect on managing the level of WhatsApp addiction among in-school adolescents in Nsukka Education Zone, Enugu State. Additionally, the study concluded that cognitive restructuring is very effective in managing WhatsApp addiction as the level WhatsApp addiction among in-school adolescents exposed to cognitive restructuring treatment reduced drastically. Cognitive Restructuring therefore should be regularly employed in counselling in-school adolescents with WhatsApp addictions.

## References

- Andreassen C.S. & Pallesen S. (2014). Social network site addiction: an overview. *Current Pharmaceutical Design*. 20(25), 4053–4061
- Assessing pattern of WhatsApp usage and its impact on medical students at U.P.U.M.S., Saifai, Etawah, India. *International Journal of Community Medicine and Public Health*. 6 (6), 2505-2509
- Azizi S. M., Soroush A.& Khatony A. (2019) The relationship between social networking addiction and academic performance in Iranian students of medical sciences: a cross-sectional study. *Psychology* 7(28).
- Badola, M., Chauhan, R., Dobhal, B., Taneja N. & Janardhanan R. (2021) Assessment of WhatsApp addiction and its correlates among the students of a private university of Delhi-NCR. *International Journal of Advanced Scientific Research*. 6(2), 2021, Page No. 27-33
- Banneyer, K. N., Bonin, L., Price, K., Goodman, W. K., & Storch, E. A. (2018). Cognitive behavioral therapy for childhood anxiety disorders: A review of recent advances. *Current Psychiatry Reports*, 20, 1–8.
- Boyd, D. M. & Ellison, N. B. (2008), Social Network Sites Definition, History, and Scholarship. *Journal of Computer-Mediated Communication*. 13(1), 2010–2030
- Hou, Y., Xiong, D., Jiang, T., Song, L., & Wang, Q. (2019) Social media addiction: Its impact, mediation, and intervention. *Cyber Psychology: Journal of Psychosocial Research on Cyberspace*, 13(1).
- Kaplan, A.M., & Haenlein, M. (2010) Users of the world, unite! The challenges and opportunities of social media. *Business Horizons*. 53(1), 59–68.
- Karpinski, A. C. & Duberstein, A. (2009) A Description of Facebook Use and Academic Performance among Undergraduate and Graduate Students. San Diego, California: American National Research Association. Pp 1- 19.
- Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. *Business Horizons*. 54(3), 241-251
- Kirschner P.A. & Karpinski A.C. (2010) Facebook and academic performance. *Computers in Human Behaviour*. 26(6):1237–1245
- Mandelbaum, M. M., Rumelt, A., Wein, S. N., & Vidair, H. B. (2024). WhatsApp with the Evidence Base for Behavioral Parent Training Apps? A Systematic Review of Mobile Phone Applications. *Journal of Child and Family Studies*, 1–10.
- Moqbel, M., Alshare, K., Erskine, M. A., & Bartelt, V. (2023). WhatsApp social media addiction and mental health: mindfulness and healing use interventions. *Behaviour & Information Technology*, 1–14.
- Moretti, F. A., Scazufca, M., Nakamura, C. A., Souza, C. H. Q. de, Seward, N., Araya, R., & Moreno-Agostino, D. (2023). Use of WhatsApp by older adults screened for depression in socioeconomically deprived areas of Guarulhos, São Paulo State, Brazil: challenges and possibilities for telehealth. *Cadernos de Saúde Pública*, 38, e00093422.
- Singh, A. P., & Misra, G. (2013). Promoting academic competence in school
- Wang, C.-Y., Wu, Y.-C., Su, C.-H., Lin, P.-C., Ko, C.-H., & Yen, J.-Y. (2017). Association between Internet gaming disorder and generalized anxiety disorder. *Journal of Behavioral Addictions*, 6(4), 564–571.