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EFFECTIVENESS OF GROUP COGNITIVE-BEHAVIOURAL THERAPY ON UNDERGRADUATE WITH IRRATIONAL INTERNET USE

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ABSTRACT

Background: *The need to investigate the level of effectiveness of behavioural therapy on the use of internet motivated this study. The study investigated the effectiveness of Group cognitive-behavioural therapy on undergraduate with irrational internet use.* ***Method:*** *Quasi-expermental, non-equivalent pre-test and posttest design was used to assign 122 guidance counsellors drawn from four federal universities in south-East to the group therapist using multi-stage sampling.* ***Procedure:*** *the generalized problematic internet use scale 2 (GPIUS2) developed by Eaplan 54 is a 15-item self-report questionnaire that assesses generalized problematic. Internet use as it relates to cognitions, behaviours, and outcomes. It was found that group CBT helped to reduce irrational internet use among undergraduate students in South-East Nigeria.* ***Results:*** *The later test result revealed that there is a significant difference in the mean scores between undergraduate students exposed to group CBT (experimental group) and those not exposed to group CBT (control group) as regards irrational internet use.* ***Conclusion:*** *therefore, this study suggest that group CBT helped to reduce irrational internet use among undergraduate students in South East Nigeria.* ***Abbreviation:*** *Group cognitive behavioural therapy (GCBT) (GPRUS2) generalized problematic internet use scale 2, (CBT) Cognitive Behavioural Therapy.*

Keywords: Group Cognitive Behavioural Therapy, internet use, irrational internet use, undergraduates in tertiary institution (IIUN) irrational internet use.

Introduction

The internet is a global network of interconnected computers and servers that provide access to a vast array of information, resources, and services. Internet use refers to the various ways individuals, organizations, and communities utilize the internet to achieve their goals, communicate, and access information.

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Irrational internet use (IIU) describes spending excessive resources (e.g., time, money, energy) on various activities on the internet to an extent that it might have harmful effects on the person's physical and psychological condition, social, academic, professional, interpersonal relationships, and other areas of life (Kim, 2017). Like other addictions, IIU may be seen as an impulse-control disorder and can be linked to a variety of problems. IIU has characteristics like pervasiveness, depression, withdrawal, tolerance, and negative effects on daily functioning.

Some health problems like headache and sleep pattern disruption might occur due to prolonged use of the internet (Jeon, 2015). The sleep patterns of people with internet addiction are interrupted due to late night internet surfing leading to excessive fatigue, and impairment of the immune system, which leaves people with internet addiction prome to disease (Alam, Mohd, Hashim, Ahmad, Wel & Nor, 2014). The authors further remarked that excessive use of the internet has led many students into risk of loss of significant relationships, sleeplessness, depression, and academic and social problems. Students' overuse of the internet may interfere with their adaptive functioning, leading to depression as well as psychological disorders.

Undergraduate students have been considered vulnerable to relational problems because of over-accessibility of the internet (Uddin, Al-Mamun, Iqbal, Nasrullah, Asaduzzaman & Sarwar, 2016). IIU among younger people has also been found to have a significant relationship with loneliness, negative self-esteem, symptoms of antisocial tendencies and externalizing control, shyness, and social disinhibition (Uddin, et al., 2016). As a result, it is important to help professionals to recognize the signs and symptoms of IIU and learn about some of the emerging treatment strategies for assisting undergraduate students with IIU disorder. Concern has been raised over excessive use of internet activities among college students in Nigeria (Gbadebo, 2022). High levels of prolonged internet use and associated psychological and physical health problems including sleep disturbances and backache have been identified among students in colleges in Nigeria (Okwaraji, Aguwa, Onyebueke, Arinze-Onyia, Shiweobi-Eze, 2015). Poor academic performance has also been linked to poor internet use (Nigerian) students. Vices driven by irrational internet use, including internet fraud and related crimes and vices, have attracted wide criticism in Nigeria. However, there is a dearth of studies attempting to practically address students with IIU problems in Nigeria. Some researchers have suggested application of therapeutic interventions to decrease the severity of IIU (Odaci & Celik, 2017; Agbaria, 2023). The current study aims to employ group cognitive-behavioural therapy to address IIU problems among undergraduates.

Cognitive-behavioural therapy (CBT) is anchored in the assumption that reaction to automatic thoughts may lead to abnormality. Beck cited in Agbaria (2023) proposed that how people think (cognition), feel (emotion), and act (behaviour) all interact to influence them. Automatic thoughts can cause negative consequences which may affect our cognitive, behavioural, and emotional

responses. Agbaria believed that how an individual feels and behaves is not anchored in life events, but in the way an individual responds to life events in that if the beliefs and responses are dysfunctional, the thoughts, attitudes, feelings, and reactions are likely to experience negative consequences. Beck suggested that for an individual to be functional and adaptive, their perceptions should reflect reality accurately (Choi et al., 2017). The CBT approach uses cognitive restructuring to change core thoughts and improve problem-solving skills towards acquiring desired adaptive behaviours. The CBT approach has been widely found to be beneficial in alleviating impulse control disorder (Kuru, Ozdemir, Safak, Tulaci & Turkcapar, 2017). It is sensible to support the view that CBT could be an effective intervention for decreasing severity of internet usage. Although there is strong emerging evidence in the literature that CBT offers benefit for treating pathological online activities, the beneficial effects of CBT are still uncertain across cultures (Cowlishaw, Merkouris, Dowling, Anderson, Jackson & Thomas, 2012). This is because of some methodological weaknesses, cultural differences and change in geographical location which exist among populations with IIU. Thus, further studies are required to evaluate the effectiveness of group CBT for IIUs in different cultural settings and geographical location.

It is important to note that using group cognitive-behavioural therapy may lead to desired behavioural outcomes (Babatunde & Osakinle, 2013). The effectiveness of groups for changing students' maladaptive behaviours has been demonstrated (Gullo, Coco, Di Fratello, Giannone, Mannino & Burligame, 2015). A group is one of the social platforms on which therapeutic dynamics and group processes can be received and revealed. Having similar characteristics as well as tendencies and interests to socialize might influence people to come together as a group. In essence, possessing common characteristics drives people to form a group in which they can interact, learn, and flourish interpersonally and socially. In particular, group interventions are advantageous in terms of efficiency, provision of alternative learning opportunities, and peer feedback when there are many subjects with relatively homogeneous characteristics, and are practiced universally for the treatment of problematic interest use. In addition, the subjects will deal with their emotional state by examining the causes of the internet use in the treatment process. Therefore, it is thought that emotions will also be affected.

Studies are lacking on the effectiveness of group psychotherapeutic interventions for Nigerian college students who have PIU problems. Prior lecturer suggests that therapy taking a cognitive-bnehavioural approach can be used for treatment of impulse-control disorders like IIU (Reed, Sharan, Rebello, Keeley, Elena & Gureje, 2018) but its promising effects have not been demonstrated in the Nigerian student population. Therefore, this study therefore aims to evaluate the effectiveness of group CBT on undergraduates with IIU in South East Nigeria.

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Statement of the Problem

The rapid proliferation of internet access and digital technologies has revolutionized the way individuals worldwide communicate, gather information, and conduct various activities. Among the beneficiaries of this digital age are undergraduate students in Nigeria who have embraced the internet as an indispensable tool for academic research, social interaction, entertainment and more. However, there is a growing concern regarding the emergence of irrational interest use patterns among these students. Nigerian undergraduate students are increasingly probne to engaging in irrational internet use, characterized by excessive and unregulated online activities that adversely impact their academic performance, physical and mental health, and overall well-being. These irrational internet use behaviours manifest in various forms, such as excessive social media usage, online gaming addiction, compulsive binge-watching of videos, and unrestricted access to inappropriate or irrelevant content.

This problem poses a significant threat to the academic and personal development of Nigerian undergraduate students. The consequences of irrational internet use include diminished focus and productivity, disrupted sleep patterns, deteriorating physical health due to sedentary lifestyles, and an increased risk of mental health issues like anxiety and depression. Moreover, excessive internet use can strain personal relationships and hinder students from effectively engaging in face-to-face social interactions.

To address this problem effectively, it is crucial to gain a deeper understanding of the factors contributing to irrational internet use among Nigerian undergraduate students, including socio-cultural influences, peer pressure, accessibility of technology, and personal motivations. Additionally, identifying potential interventions and strategies to promote responsible and balanced internet use is essential for mitigating the adverse effects of this phenomenon. This research aims to explore the root effects of irrational internet use among Nigerian undergraduate students, ultimately leading to the development of targeted interventions such as group CBT. It is therefore against this background that this study seeks to determine the effectiveness of group CBT on undergraduates with IIU in South East Nigeria.

Research Question

1. What is the effect of group cognitive behavioural therapy on irrational internet use among undergraduate when compared with those not exposed to group cognitive behavioural therapy using their pretest and post-test mean scores?

Hypothesis

1. There is no significant effect of group cognitive behavioural therapy on irrational internet use of undergraduates when compared using their pre-test and post-test mean scores.

Method

The study adopted a quasi-experimental pre-test, post-test research design. Specifically, the pre-test, post-test,

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non-equivalent control was adopted. **Participants:** The population of the study consisted of all 200 level undergraduates in guidance and counselling in the four federal universities offering guidance and counselling in South East Nigeria. The sample for this study comprised 122 students. **Population of the Study:** This study was conducted among Guidance and Counselling undergraduates in Federal universities in South East Nigeria. Out of the seven Federal universities in South East Nigeria, only four has a Department for Guidance and Counselling. Therefore, the population consisted of all Guidance and Counselling undergraduates in the four federal universities in South East Nigeria offering guidance and counselling in their institutions. **Sample and Sampling Technique:** The multi-stage sampling technique was employed in this study. In stage one, the purposive sampling technique was used to select two federal universities (Nnamdi Azikiwe University, Awka and University of Nigeria, Nuskka). In stage two, purposive sampling technique was used to select 200 level Guidance and Counselling undergraduates who are regular students for the 2022/2023 academic session. In stage three, simple random sampling (by balloting) was used to select Nnamdi Azikiwe Univeristy, Awka as the experimental group while university of Nigeria, Nsukka was used as the control group. Nnamdi Azikiwe University consisted of 58 (27 males and 31 females) Guidance and Counselling undergraduate regular students for the 2022/2023 academic session while university of Nigeria, Nsukka comprised of 64 (29 males and 35 females) Guidance and Counselling Undergraduate regular students.

Instrument

Generalized problematic internet use scale 2 (GPIUS2) developed by Caplan 54 was used for data collection. The researcher adopted the instrument. The scale is a 15-item self-report questionnaire that assesses generalized problematic internet use as it relates to cognitions, behaviours, and outcomes. The GPIUS2 is scored using a 7-point scale with response options ranging from 1 = strongly disagree to 7 = strongly agree. Lower scores represent less problematic level of internet use. The reliability and validity of the instrument have been ascertained in various cultural contexts. For example, Lakens (2013) utilized an Italian undergraduate population to report the internet consistency of the scale and reported good validity and reliability: a = 0.86. the current study established a Cronbach's alpha co-efficient of a = 0.88.

Treatment Manual

The GCBT Manual covers an 8-week work plan that describes the steps the researchers used to administer treatment to the participants. It is organized as follows: sessions, objectives, content, treatment activities and techniques. These sessions are sub-divided into eight sessions. The sessions were structured to last for 40 minutes each. The main objective is to reduce the pathological level of internet use among the students. The goal of each session is described in the manual, which contains the main topic(s) of each treatment session. Among the objectives of the treatment manual is to help participants appreciate the

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nature and problem of IIU, commit to genuinely engage in the GCBT program, understand the tenets of CBT theory and techniques, consider and adopt other activities to replace their intensive internet use, and identify antecedent behaviours and commit to developing specific plans to counter PIU.

Experimental Procedure

The treatment lasted for eight weeks. Before the experiment commenced, respondents in both experimental and control groups were given generalized problematic internet use scale 2 (GPIUS2) as pre-test. Thereafter, teaching on group cognitive behavioural therapy commenced using prepared treatment manual that were divided into eight units. Each unit was covered within one week for eight weeks. During the treatment, the experimental group was taught with group cognitive behaviour therapy manual. The control group was equally kept busy with similar but different activities on the treatment group. At the end of the treatment generalized problematic internet use scale 2 was administered to both experimental and control groups as posttest. The items of the scale were reshuffled, that is changing the position of item but each statement was the same as it was before using them as post-test.

However, the researcher was aware of the possible effect of extraneous variables if not well controlled could have condemned the study. The researcher therefore adopted some measures to minimize these variables such measure include:

Interaction effect: This was taken care of by the use of different universities for the study. This was done to control the issue of subject interaction. This is errors that might arise as a result of the participants from experimental and control groups interacting and exchanging ideas. Another extraneous variable was pre-test sensitization. The use of the same items for both the pre-test and post-test could result to students performing better in the post-test as a result of pre-test sensitization. To control this, the research reshuffled the items for the post-test to make them look different from the pre-test, withdraw all the items of instrument from the students after the pre-test. Furthermore, the researchers ensure the time between the pre-testing and post-testing was not less than six weeks.

Data Analysis

The research question was answered using statistical mean and standard deviation. The hypothesis was tested using Analysis of Covariance (ANCOVA) at .05 level of significance. For the null hypothesis the decision rule was when the p-value is less than .05 level of significance (P <.05), the null hypothesis was rejected but when the p-value is greater than .05 (p>.05) the null hypothesis was not rejected.

Presentation of Results

The results of the research are presented according to the research question and the hypothesis.

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Table 1: Pre-test and post-test irrational internet use mean scores of undergraduates exposed to Group Cognitive Behaviour Therapy (CBT) and those not exposed to Group CBT.

Group	N	Pre-test	SD	Post-Test	SD	Mean gain
Experimental group	58	71.07	2.66	35.45	2.89	35.62
Control group	64	51.51	2.76	50.89	2.68	0.62
						25.00

Data on table 1 revealed that the mean score of 35.45 after administration of group cognitive behavioural therapy was less than the mean score of 71.07 before administration of group CBT in the experimentation group. More so, the mean gain of 35.62 for the experimental group is greater than 0.62 mean gain of the control group. The mean difference of 35.00 is in favour of the experimental group. This means that group CBT helped to reduce irrational internet use among undergraduate students.

Table 2: ANCOVA on irrational internet use mean scores of undergraduates exposed to group cognitive behaviour therapy and those not exposed to Group Cognitive Behavioural Therapy

Source	Sum of Squares	Df	Mean Square	Cal-F	Sig.
Corrected model	1445.007[a]	2	722.504	100.473	.000
Intercept	4369.875	1	4369.875	607.685	.000
Achievement	.397	1	.397	.055	.815
Treatment	1308.402	1	1308.402	181.949	.000
Error	826.968	130	7.191		
Total	164629.000	132			
Corrected Total	2271.975	131			

Table 2 revealed that at .05 alpha level and degree of freedom of 1 numerator and 130 denominator, the p-value of 0.00 is less than 0.05 ($F(1,130) = 181.949$; $P < .05$). therefore, the null hypothesis is rejected, therefore, there is a significant difference in the mean scores between undergraduate students exposed to group CBT (experimental group) and those not exposed to group CBT (control group) as regards irrational internet use.

Discussion of Findings

The finding reveled that group CBT helped to reduce irrational internet use among undergraduate students in South East Nigeria. This means that excessive use of the internet could cause academic, social, and interpersonal problems. The findings of the study support Du, Jiang and Vance (2010) who indicated that group cognitive behavioural therapy decreased schooling adolescents' internet addiction. Another study conducted in Germany revealed positive therapeutic effects of a cognitive

behavioural group program in improving lifestyle of youngsters who were affected by PIU (Wartberg, Winker, Dorsing, Rief, Shen and Glomblewski, 2013). The finding is also consistent with the study of KIM, YIM, Jung, Lee and Park (2018) who found that group therapy enhances significant change in people with PIU. This is in consonance with KIM (2008) who indicated that group therapy effectively reduced addiction level of internet addicted university students. In essence, PIUs that receive GCBT could change considerably.

The corresponding hypothesis revealed that there is a significant difference in the mean scores between undergraduate students exposed to group CBT (experimental group) and those not exposed to group CBT (Control group) as regards irrational internet use. The results of the present study agree with the past studies (Agah, Ede, Zudonu, Asor & Onyishi, 2021) on the promising impacts of cognitive behavioural therapy for decreasing psychological disturbances as well as improving quality of life over time. Like the long-term effect of rational-emotive and cognitive-behavioural therapy found by Ifeanyieze, Ede, Ejiofor, Ekenta, Onah and Okechukwu (2021), the treatment outcome of this study also suggested that CBT has long-term effectiveness in reducing PIU. Demonstrating the importance of psychological intervention of this kind, our study finding supports previous reports.

Conclusion

Based on the findings of the study, it was concluded that group CBT helped to reduce irrational internet use among undergraduate students in South East Nigeria. This means that excessive use of the internet could cause academic, social and interpersonal problems. The study also concluded that there is a significant difference in the mean scores between undergraduate students exposed to group CBT (experimental group) and those not exposed to group CBT (control group) as regards irrational internet use.

Recommendations

Based on the findings of this study, the following recommendations were made:

1. Mental health professionals and other helping professionals in Nigeria could use GCBT in counselling students who use the internet excessively. Granted that the severity level of psychological symptoms associated with PIU among undergraduates could be minimized using GCBT.
2. Since the study outcome revealed the long-term effects of group CBT, cognitive behavioural therapists, psychologists, school counsellors, teachers in colleges, and other schools should adopt the principles of CBT in helping students with behavioural problems. By practicing the assumptions of CBT, inappropriate behaviours such as pathological behaviours and the types in which students excessively indulge in could be reduced using CBT.

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