



Type A Behavior Pattern and Depression as Correlates of Substance Usage Duration among Patients Diagnosed with Substance Use Disorder: Implications for Mental Health Professionals

Ijere IN^{1*}, Okeke OI², Nwaoru CR³ and Chukwuka NN⁴

¹Department of Public Health, Syracuse University, USA

²Imo State University, Nigeria

³Department of Psychiatry, Federal Medical Center, Nigeria

⁴Department of Psychology, University of Agriculture and Environmental Sciences, Nigeria

***Corresponding author:** Ignatius Nnamdi Ijere, Associate Teaching Professor, Department of Public Health, Falk College, Syracuse University, New York, USA, Email: inijere@syr.edu

Received Date: December 29, 2022; **Published Date:** January 31, 2023

Abstract

Background: In recent decades, substance use disorder has continued to increase despite evidence-based development to deal with the prevention and treatment of drug abuse. However, other psychological disorders and personality characteristics for instance depression, type A trait etc. have complicated the life of substance users. This research investigated the relationship between Type A behavior and depression on substance use duration among patients diagnosed with substance use disorder.

Method: Two instruments were used for the study. They are the Self-rating Depression Scale (SDS) which is a 20-item, 4-point Likert scale instrument that measures traits of mild to severe depression. The second instrument used for the study was the Type A Behavior Scale, a 28-item, 4-point Likert scale instrument that measures Type A personality traits. Participants for this study were 26 in-patients of the Neuropsychiatric Hospital Rumuigbo Port Harcourt who have been clinically diagnosed with substance/polysubstance use disorder (SUD). Spearman rank order correlation was used to analyze data.

Results: Results from the study showed that a type A personality trait is not significantly associated with the duration of substance usage in patients who were diagnosed with SUD $r(26) .26 (p<.05)$. Also, Depression is not significantly associated with the duration of substance usage in patients who were diagnosed with SUD $r(26) .18 (p<.05)$.

Conclusion: Findings from the study indicate that type A behavioral pattern and depression did not significantly correlate with duration of substance use respectively; however type A behavioral pattern and depression significantly correlated with each other among the population that were tested. With a mean age of 25.1 years and a mean duration of substance usage of 5.6 years, these figures suggests a chronic and persistent substance usage among young persons, with an early age onset of drug use (<18 years). There is a need for a holistic substance abuse intervention strategy. But, more importantly, substance prevention programs should be implemented across all strata of society, starting from the federal, regional, state, and community levels, and especially among young people.

Keywords: Type A behavioral pattern; Depression; Type A personality traits

Abbreviations: SUD: Substance/Polysubstance Use Disorder; SDS: Self-Rating Depression Scale; UNODC: United Nations Office on Drugs and Crime; DSM-5-TR: Disorders, Fifth Edition, Text Revision; MDD: Major Depressive Disorders.

Introduction

Substance use disorder is a term that refers to an illness categorized by an individual's inability to control his indiscriminate use of illegal, pharmacological, or psychoactive substances, leading to difficulties in emotional, cognitive, and behavioral functioning. The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, text revision (DSM-5-TR) criteria for a diagnosis of substance abuse include using the substance in larger quantity or for a longer duration than it is meant for, difficulty in controlling usage of the said substance(s), cravings, inability to function optimally at work, home, socially or academically because of substance use, dependence/ development of withdrawal symptoms. Substances include alcohol, caffeine, cannabis, hallucinogens, inhalants, opioids, sedatives, hypnotics, anxiolytics, stimulants (including amphetamine-type substances, cocaine, and other stimulants), and tobacco. Hartney E [1] classified substance-related disorders into substance-use disorders and substance-induced disorders. Which are "patterns of symptoms resulting from the use of a substance that you continue to take, despite experiencing problems as a result," and substance-induced disorders were described as adverse effects of substance use, such as intoxication, withdrawal, and other substance/medication-induced mental disorders.

In terms of the global prevalence of substance abuse, researchers have revealed that substance abuse is fast becoming a global health pandemic. For instance, United Nations Office on Drugs and Crime (UNODC) [2] estimated that about 271 million individuals aged between 15 and 64 years had used substance (drugs) globally. Whereas, in Nigeria, one in seven persons aged between 15 and 64 years have used substance (drugs) in a survey carried out in 2019. In addition, burglary, theft, rape, and domestic violence, among other crimes, have been linked to the usage of substances in Nigeria [3].

Furthermore, many studies have been conducted to reduce substance prevalence globally. For instance, Mora [4] acknowledged that recent scientific studies in psychosocial and neuroscience have revealed some novel approaches and modalities in addiction prevention and treatment. These novel studies identified several risks and protective determinants of chemical addiction at the individual and community level. In 2013, the Center for Substance Abuse Treatment (US) [5] revealed the different components of

substance abuse treatment, including but not limited to group therapy, individual therapy, family/couples counseling, and medication services. It was also found that tailoring treatment and prevention modalities to gender-specific is essential for the utmost effective outcome. In another study, Kim HS, et al. [6] suggested that a transdiagnostic treatment approach for substance abuse provides extensive opportunities also to treat mental illness that might associate with substance abuse. Other studies have also examined differences in attitude and behavior between clients with substance abuse/personality traits and those with only substance abuse. For instance Arrico JEM, et al. [7] in their study that aimed at describing personality characteristics of clients with SUD +MDD and addicts with only SUD, revealed that addicts with MDD are more likely "to be emotionally upset, tense, worried, fearful, indecisive, lack of self-confidence, and sensitive to criticism (higher N-Anx), than patients with SUD only and population norms" (p.1). However, they could not ascertain precisely what type of personality traits. Our study intends to explore if there is a relationship between Type A behavior patterns and Depression on substance use duration among patients diagnosed with substance use disorder.

Researchers have been interested in treatments and prevention of drug use disorders. However, little interest has been shown in personality and psychological factors that could necessitate and sustain drug use and duration of drug use.

It is then imperative that the present study examines Type A personality patterns and Depression as factors that could determine drug use and duration of drug use/abuse among Patients Diagnosed with Substance Use Disorder. Personality type is a psychological term used in categorizing different individual behavior (s) based on their uniqueness. It could be one of the major contributors to drug abuse [8]. It could play a significant role in determining who could abuse drugs and who could not. This Personality type can be categorized into Type A and Type B personality patterns, according to Friedman, et al. [9]. They said that individuals with type A behavior are highly competitive, zest, ambitious, impatient, well-organized, angry easily, and always pressure themselves to do things. One could say that people with type A behavior pattern act on fleeting feelings, make rapid decisions without due consideration, and are very sensitive, combative, and prone to making quick decisions.

Hence, individuals with type A behavior could be more prone to high levels of self-induced stress and react negatively to common life threats, leading to negative coping styles, such as using substances. On the other hand, individuals who are depressed due to emotional, psychological, or economic stressors could perceive substances as a means of escaping their depressive thoughts, which could lead to substance

abuse/dependence. In line with the University of Michigan depression center (2014), Depression is said to be an actual illness that impacts the brain. No wonder it has been called a brain disease. It is not just an individual's feeling but a change in brain chemistry. Humans are generally affected by mood swings from time to time. However, when it becomes persistent and chronic, and when an individual continuously feels dejected, sad, and worthless, it could indicate a depressive condition. Dubey C, et al. [10], in their study of five-factor personality traits of substance abusers and non-substance abusers, reported that substance abusers had a significantly high score on the neuroticism and extraversion dimensions compared to non-substance abusers. Their study also reported that substance abusers are more prone to anxious thoughts, hostile, more vulnerable to stress and had depressive traits. This study also revealed that substance users are more turned to excitement-seeking and assertive traits when compared to other subjects. Asika OC [11] in his study reported that personality type has no significant impact on drug abuse. More so, Ojiaku MC, et al. [8], in their study of the influence of personality on drug addiction, found that Personality type did not significantly influence involvement in drug abuse among their participants.

Aims of Study

This research aims at investigating if there is a relationship between Type A behavior patterns and Depression on substance use duration among patients diagnosed with substance use disorder and proffer implications for mental health professionals. Theoretical background Exploring theoretical models and relevant empirical studies to explain substance use disorder.

Social learning theory Bandura, 1977 posits that all behaviors can be learned, and substance use can also be learned or unlearned. The concept of modeling is a significant theme in social learning theory, where an individual learns certain behaviors from individuals they may perceive as a social model.

Stress and coping theory Kaplan 1996, this theory posit that in trying to avoid stress and in trying to cope with stressful situations, an individual may alienate themselves from family, friends, or situations that they perceive as stressful; consequently, they may engage in substance use as a means of 'escape' or as a response to the perceived stressors.

Personality Theory of Substance Use [12]. Here we will explore the psychoanalytic model explaining the relationship between personality and substance use disorder. The theory also examines the effect of the id, the ego, and the superego. This theory will help explain the relationship between a person's personality and substance use pattern.

The psychoanalytic perspective of drug dependency is best understood by examining how an individual's ego organization and sense of self-serve or fail the individual's attempts to cope and how the specific effects of various substances facilitate or impede such attempts.

Research Hypotheses

H01- There will be no significant relationship between Type A Behavior Pattern and Duration of Substance Use among patients diagnosed with substance use disorder.

H1- There will be a significant relationship between Type A Behavior Pattern and Duration of Substance Use among patients diagnosed with substance use disorder

H02- There will be no significant relationship between Depression and Substance Use Duration among patients diagnosed with substance use disorder.

H2- There will be a significant relationship between Depression and Substance Use Duration among patients diagnosed with substance use disorder

H3- There will be a significant relationship between Type A Behavior Pattern and Depression on Duration of Substance Use among patients diagnosed with SUD.

Method

Participants

Participants for this study were in-patients of the Neuropsychiatric Hospital Rumuigbo Port Harcourt who have been clinically diagnosed with substance/polysubstance use disorder (SUD). The participants consisted of all available in-patients with the SUD diagnosis. Out of the 26 participants 24 were males (92.3%) and 2 were females (7.7%), and their age ranging from 19-40 years (mean age = 25.1, SD = 4.5). Their educational level revealed that postgraduate was 3.8%, tertiary 65.4%, secondary 23.1%, primary 3.8%, no formal education 3.8%.

Instruments

Two instruments were used for the study. They are the Self-rating Depression Scale (SDS) by Zung WW [13], which is a 20-item, 4-point likert scale instrument that measures traits of mild to severe depression. Responses were extracted the format, 1-some or a little of the time, 2- some of the time, 3-good part of the time, and 4-most or all of the time. The second instrument used for the study was the Type A Behavior Scale, by Omoluabi PF [14], which is a 28-item, 4-point likert scale instrument that measures Type A personality traits, and is characterized by ambitiousness, aggressiveness, competitiveness, impatience, muscle tension, rapid speech, irritation, hostility and anger. Responses were extracted using this format: - 1-never true, 2-occasionally true, 3- often true, and 4- always true.

Procedure

After due approval was sought and obtained from the hospital management for the study to be carried out, the researchers were introduced to the in-patients during their weekly support group therapy. The patients were briefed about the purpose/objective of the study, and their consents were procured. Adequate rapport was established with the participants, anonymity and confidentiality were assured after which the questionnaire was administered. The questionnaires were completed in one session. They took an average of 30 minutes to answer the two questionnaires. Purposive sampling method was used in selecting the participants. Data from the responses were collated and statistically analyzed using SPSS version 22.

Design and Statistics

This is a correlation design; consequently, spearman rank order correlation was used to analyze data.

Results

This section provides the result of the findings

	Age	Drug Duration	Type A	SDS
Mean	25.1	5.61	61.1	46.9
SD	4.53	4.09	14.5	9.32

N=26

Table 1: Mean and standard deviation table.

Table 1 above showed the mean and standard deviation of the participant's age, duration of substance use, type A behavior and depression score.

	Drug use duration	Type A behavior	Depression
Drug use duration	-		
Type A behavior	0.26	-	
Depression	0.18	.45**	-

Note: ** Correlation is significant at the .05 level (2 tailed)

Table 2: Correlation matrix between variables of interest.

Table 2 above shows a matrix of the obtained results from the study.

The first null hypothesis (H01) which stated that there will be no significant relationship between type A behavior pattern and duration of substance use among patients diagnosed

with substance use disorder, was accepted at $r(26) .26$ ($p < .05$). Though the result revealed a positive relationship, it however was not significant; hence the null hypothesis was confirmed. The second null hypothesis which stated that there will be no significant relationship between depression and substance use duration among patients diagnosed with substance use disorder was also accepted at $r(26) .18$ ($p < .05$). The result revealed a positive relationship, which was not also significant; hence the null hypothesis was confirmed. Furthermore, the third hypothesis which stated that type A behavior pattern will significantly correlate with depression among patients diagnosed with substance use disorder, was also accepted at $r(26) .45$ ($p < .05$). The observed result showed a statistically positive relationship, with reasonable significant proportion; thereby confirming the hypothesis.

Data presented in Table 1 shows that the mean age of respondents is 25.1, with a standard deviation of 4.53, duration of substance use (Mean 5.61, SD 4.09), type A personality pattern (Mean 61.1, SD 14.5) and depression (Mean 46.9, SD 9.32)

Discussion

The present study investigated the relationship between type A behavioral pattern and depression on duration of substance use among patients diagnosed with substance use disorder at the Neuro-psychiatric hospital Rumuigbo Port-Harcourt. Three hypotheses guided this study. The first null hypothesis of the study was confirmed. Results from the study, as presented in Table 2 indicates that having a type A personality trait did not significantly correlate with duration of substance use in patients with substance use disorders. This implies that having a type A personality trait (which is characterized by competitiveness, zest, extremely ambitious, impatient, well-organized, easily irritated), is not significantly associated with the duration of substance usage in patients who were diagnosed with SUD. Similar findings by Asika OC [11] also indicated that personality type has no significant impact on drug abuse. In the same vein Friedman M [8], also acquiesced in their study that personality type did not significantly influence involvement in drug abuse among their participants. An explanation to this may be that individuals who possess type B personality traits which are describes as unambitious, uncompetitive, and indecisive may be prone to use more substance and for longer duration, so as to give them a 'false sense of confidence'.

The second null hypothesis was also confirmed, as was also captured on Table 2. The study reveals that depression did not significantly correlate with duration of substance use in patients with substance use disorders. This finding infers that depression did not show a substantial relationship with the duration of substance use by the studied population. This

study interestingly was contradicted by the findings of Arrico JEM, et al. [7] whose study suggested that clients with SUD and major depressive disorders (MDD) are more likely “to be emotionally upset, tense, worried, fearful, indecisive, lack of self-confidence, and sensitive to criticism than patients with SUD only and population norms”. An explanation to this may be that the participants of the present research were not depressed at the time of the study, having been on admission in the hospital and were being treated, it could also be that they used substance as a coping mechanism against stressors before their admission.

The third hypothesis was also confirmed, as the results indicated that there was a significant relationship between type A personality trait and depression. This finding surmise that type A personality behavioral pattern and depressive traits have an observed correlation among the substance addicts that were studied. This is in tandem with the observations by Dubey C [10], who deduced that substance abusers are more prone to anxious thoughts, hostile, more vulnerable to stress and had depressive traits. An explanation for this trend may be that individuals with type A behavioral trait experiences depression because of their self-assigned pressure to achieve more, their ambitious and competitive trait; hence the inclination to be sad and feel worthless when they do not achieve their set goals.

Implications for Mental Health Professionals (Perspectives for Psychosocial Treatment Interventions)

Evidence-based practice has shown that psychosocial intervention strategies are effective for the treatment of substance abuse disorders. Since substance addiction or problematic substance use has negative effects on significant aspects of an individual’s life such as on physiological, psychological, and relational, it is then no wonder that there has been an increased interest on the advancement and standardization of psychosocial treatments [15].

There are different treatment interventions for substance abuse disorders, such as motivational interviewing, contingency management, behavioral couple’s therapy, guided self-help, and behavioral activation. However, these interventions are primarily based on the mental health practitioner’s theoretical background. These treatment strategies must possess basic competencies or ‘common factors’ which should be reflected in any chosen psychological therapy plan, if effective delivery of intervention outcome is desired [16-18].

For mental health professionals, effectiveness of evidence-based intervention for substance use disorders are primarily

assessed based on the ability of the treatment intervention to reduce or eliminate the substance usage, with resultant improvement of the relational and individual functioning [15].

Conclusion

The study examined the relationship between type A behavioral pattern and depression on duration of substance use among patients diagnosed with substance use disorder. Three hypotheses were tested; and two null hypotheses and one experimental hypothesis were accepted. The study observed that whereas type A behavioral pattern and depression did not independently and significantly correlate with duration of substance use, they did however correlate with each other among the population that were tested. The study also observed that the mean age and the mean duration of substance usage among the population tested is 25.1 years and 5.6 years respectively. These figures are indicative of chronic and persistent substance usage, given that the study participants are mostly young persons, with an early age onset of drug use (<18 years).

This worrisome trend calls for a holistic substance abuse intervention strategy. More substance prevention programs should be implemented across all strata of the society, starting from the federal, regional, state and community levels, and especially among young people. This study will be useful for medical, psychologists and social/health professionals in understanding the personality dynamics of substance abuse, and thereby charting effective strategies for the prevention and management of individuals with substance abuse disorders.

Recommendations for Further Research

The correlation of type B behavioral pattern on individuals diagnosed with substance abuse disorder was not studied in this research. Further research should investigate the effect or/and the influence of this behavioral pattern (if any) on the duration of substance usage.

Also, further study should concentrate on the impact of psychological interventions such as psychoeducation, psychotherapy, and substance abuse support groups, on the prevention and the duration of substance abuse usage.

Limitations

The key limitation of this study is the small number and distribution of the study participants, which makes it difficult to generalize the results.

References

1. Hartney E (2022) DSM 5 criteria for substance use disorders.
2. United Nations Office on Drugs and Crime (UNODC) (2019) World drug report 2019.
3. Jatau AI, Shaaban A, Gulma KA, Shitu Z, Khalid GM, et al. (2021) The burden of drug abuse in Nigeria: A scoping review of epidemiological studies and drug laws. *Public Health Reviews* 42: 1603960.
4. Mora MEM (2005) Prevention of substance abuse: a brief overview. *World Psychiatry* 4(1): 25-30.
5. Center for Substance Abuse Treatment (US) (2013) Addressing the Specific Behavioral Health Needs of Men. Rockville (MD): Substance Abuse and Mental Health Services Administration (US).
6. Kim HS, Hodgins DC (2018) Component model of addiction treatment: A pragmatic transdiagnostic treatment model of behavioral and substance addictions. *Frontiers in Psychiatry* 9: 2018.
7. Arrico JEM, Martinez LR, Navarro JF, Prat G, Adan A (2019) Personality profile and clinical correlates of patients with substance use disorder with and without comorbid depression under treatment. *Frontiers in Psychiatry* 9: 764.
8. Ojiaku MC, Nwokoro CO (2021) Are personality type and peer pressure determinants of drug abuse among university students?. *Journal of Social Behavior and Community Health* 5(2): 7831.
9. Friedman M, Rosenman RH (1974) Type A Behavior and Your Heart.
10. Dubey C, Arora M, Gupta S, Kumar B (2010) Five Factor Correlates: A comparison of substance abusers and non-substance abusers. *J Indian Acad Appl Psychol* 36(1): 107-114.
11. Asika OC (2011) Influence of personality and self-efficacy on teenage drug abuse among secondary school. Unpublished B.Sc. project. Department of Psychology.
12. Freud S (1949) *An Outline of Psychoanalysis*. London: The Hogarth Press.
13. Zung WW (1965) A self-rating depression scale. *Archives of General Psychiatry* 12: 63-70.
14. Omoluabi PF (1997) The development of TABP - a unified scale for assessing Type A behavior pattern. Unpublished manuscript Department of Psychology University of Lagos.
15. Jhanjee S (2014) Evidence based psychosocial interventions in substance use. *Indian Journal of Psychological Medicine* 36(2): 112-118.
16. Pilling S, Hesketh K, Mitcheson L (2010) Psychosocial interventions for drug use: A framework and toolkit for implementing nice-recommended treatment interventions. *British Psychological Society and National Treatment Agency* pp: 1-68.
17. American Psychiatric Association (APA) (2022) *Diagnostic and Statistical Manual of Mental Disorders*. 5th (Edn.), text revision.
18. Klostermann K, Mignone T (2019) Behavioral couples therapy for substance use disorders: Implementation considerations. *Acta Scientific Medical Sciences* 3(8): 50-51.