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Influence of Parents' Socio-Economic Status on the Efficacies of Cognitive Behavioural and Motivational Interviewing Therapies in Managing Substance Abuse among Secondary School Adolescents

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Abstract
The study examined parents' socio-economic influence on the efficacy of Cognitive Behavioural and Motivational Interviewing Therapies in managing substance abuse among secondary school adolescents in Edo State. To guide the study, one research question was raised with its corresponding hypothesis formulated and tested at 0.05 level of significance. The population of the study consisted of 2,227 senior secondary school students from the 12 public schools in the study area. A sample size of 144 students was chosen from three schools. The instrument for data collection was validated and a reliability coefficient of 0.982 was obtained using Cronbach alpha statistics. The data collected were analysed using Analysis of Covariance (ANCOVA). The findings revealed that parents' socio-economic status had no significant interaction effect on the treatment while managing substance abuse. Based on the findings of the study it was recommended, among others, that irrespective of parent's socio-economic status, parents, siblings and peers of adolescents should be exposed to the dangers of substance abuse and help direct adolescents in having first-hand information on the negative impact of substance abuse and how it should be avoided.
Keywords: parents' socio-economic status, cognitive behavioural interviewing, motivational interviewing, substance abuse, adolescents.

Introduction

In the 21st century, a widespread misuse of substances like marijuana, tramadol, analgesics, cough syrup and cocaine has emerged as a major global public health concern (UNESCO, 2019), with 22% of secondary school students on drugs and males having a higher exposure (Siringi, 2003). Eyo and Sampson (2024) reported that the prevalence of use of psychoactive

substances among secondary school students is high. This ailment has become one of growing concern worldwide due to its impact on society at large; especially since it currently constitutes a threat through juvenile delinquency issues which have criminalized many young people (Ogunbiyi, 2022). Substance abuse represents a global issue and have caused high mortality due to dangerous intake of drugs such as opiates or opioids, cannabis, amphetamines and prescriptive psychoactive medicines obtained through unauthorised channels without consulting any doctor (Oshodi et al., 2017). This has led to poor outcomes which stem from these dependencies, including factors affecting schooling/job retention/health/social well-being (Embleton et al., 2015). It has also been linked to higher prevalence rates of psychopathology (Myers et al., 2000).

The need and interest of adolescents may sometimes predispose them to having conflicting thoughts and emotions, which are likely to result in behavioural problems, irrational thoughts, low self-esteem, violence and abuses of various forms (Audu & Oaikhena, 2019**)**. Also, the difficulty during adolescent's developmental phase and inability to carry out some expected societal tasks could weaken the interaction between the adolescent and society, thereby making them susceptible to deviant behaviour. Such deviant behaviour includes truancy, stealing, violent disposition, bullying, and substance abuse, among others.

Substances are legal and illegal chemical pills, volatile or liquid, that may have the propensity to intoxicate and likely cause harm to the individual. Examples of substances/drugs abused include alcohol, amphetamines, cocaine, inhalants, marijuana, prescription drugs, tranquillisers, sedatives, hallucinogens, and stimulants. Others are tramadol, tom tom in lacasera, dry pawpaw leaves, codein, among others (Eyo et al., 2025). Various substances used may result in serious psychological disturbance, according to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) (APA, 2013). Chronic use of substances has numerous consequences that include deficits in domains such as cognitive functioning, physical health, educational achievement, psychology, social incompetence, and relationships (UNODC, 2018).

Substance abuse disorder is notably prevalent among the teenage population, with a prevalence of 43.7% (Johnston et al., 2021); so much so that in some places, around 10% to 30% of adolescents use drugs. Moreover, over 1.5 million adolescents and young adults aged 10-24 died in 2019 due to substance use (World Health Organisation, 2021). Researchers have reported that approximately 75% of individuals who were diagnosed with a substance use disorder (SUD) had a concomitant, treatable mental health diagnosis in their lifetime (Cridland, et al., 2012). Consistent use of substances has been associated with an increase in

criminal activity, notably among younger individuals aged 14–15 (Fergusson et al., 2002). In France, in 2017, as statistics indicate, four out of ten 17-year-olds (37.1%) had already experienced cannabis consumption (Spilka & Le N´ezet, 2018).

Common Cognitive Behavioural Therapy (CBT) approaches are structured and focused on identifying the cognitive and environmental factors controlling a problematic behaviour, then developing and rehearsing the skills required to achieve change. Cognitive behavioural therapy has been identified as a leading treatment method used with the substance-abusing population (Aviram & Westra, 2011). Literature is abundant on the utilisation of cognitive behavioural therapy with the substance abusing population (Aviram & Westra, 2011; Najavits & Hien, 2013; Wolff et al., 2012; Windsor et al., 2015).

Miller and Rollnick (1991, 2002) developed Motivational Interviewing, which has been described as the most influential and widely used brief intervention (Woodin & O'Leary, 2010**)**. Motivational Interviewing is a collaborative conversation that helps clients with the primary purpose of strengthening a person's motivation for change (Miller & Rollnick, 2013). The term "motivational interviewing" can describe a therapist's style and specific techniques to facilitate therapy. Techniques used in Motivational Interviewing include having an empathic, non-judgmental stance; listening reflectively; developing discrepancy; rolling with resistance and avoiding argument; and supporting self-efficacy for change (Miller & Rollnick, 1991; (Miller & Rollnick, 2002). In Motivational Interviewing-based interventions, the therapist, rather than taking the position of the expert, takes the position of a collaborative partner. Therapists will then use specific skills, such as open questions, listening, summarising ideas, reflecting, and providing affirmation.

It is also noted that those using Motivational Interviewing techniques as part of an intervention for adolescent substance abuse may reduce risk behaviour and improve engagement, retention, and treatment outcomes (Baer & Peterson, 2002). Studies have shown that combining Motivational Interviewing (MI) and cognitive behavioural treatment (CBT) as an intervention is more effective for changes in unhealthy behaviours than providing motivational intervention only (Chew et al., 2019; Moyers & Houck, 2011; Narr & Safren, 2017; Barrett et al., 2021; Chermack et al., 2019).

Adegunju et al. (2024) report that socio-economic challenges faced by parents significantly increase the likelihood of adolescent substance use. Family structures provide the foundational support for adolescents, influencing their decision-making, coping mechanisms, and overall resilience against external pressures. According to Foo et al. (2012), a person's drug use can be significantly impacted by their family's economic stability; including where

they live (Jalilian et al., 2015), which is an underlining component that predicts parents' socioeconomic status. This financial security is determined by the income bracket that an individual or a household falls under (Lasser, 2023). Studies have found a greater likelihood of substance use among youth from families with higher parents' socioeconomic status (Martin & Pritchard, 1991); as children of more affluent families may be at greater risk, specifically, for engagement in anxiety- and depression-related substance use (Luthar, 2003; Luthar & Latendresse, 2005); also parents in high-parents' socioeconomic status families compared with those in lower parents' socioeconomic status families may have attitudes that are more tolerant toward substance use (Luthar & Goldstein, 2008).

Research question

1. What is the interaction effect of parental socio-economic status on Cognitive Behavioural Therapy, Motivational Interviewing Therapy and the Control groups of adolescents with substance use?

Hypothesis

Ho1: There is no significant interaction effect of parental socio-economic status on Cognitive Behavioural Therapy, Motivational Interviewing Therapy and the Control groups of adolescents with substance use.

Methodology

The study was quasi-experimental which adopted the pre-test, post-test, and control groups design. The study consisted of three independent variables which are Cognitive Behavioural Therapy, Motivational Interviewing Therapy and the control groups; with the intervening variable of parent's socio-economic status having three levels. The population of this study consisted of all public senior secondary school students in Egor Local Government Area of Edo State in Nigeria. There are twelve (12) public senior secondary schools with a total number of two thousand, two hundred and twenty-seven (2,227) senior secondary school students.

The simple random sampling technique was used to select three (3) schools from the 12 schools in Egor Local Government Area of Edo State in Nigeria. This selection was done by writing the names of the 12 schools on a sheet of paper, folded and put into a blind bag which the researchers randomly picked the first three schools used for the study. These three schools were labelled A, B and C. A and B were the experimental groups which was exposed to treatments while the control group was given a placebo. The students were then pre-tested to

identify their level of substance abuse, a total of 144 students from the three schools met the criteria, 66 from group A, 38 for the second group (B) and 40 for the last group (C); then treatments were administered.

Table 1: Sampling distribution of males and females for experimental and control groups

S/N	Groups	Sample Sizes		
		Male	**Female**	**Total**
1	CBT	35	31	66
2	MIT	23	15	38
3	Control Group	8	32	40
	Total	**66**	**78**	**144**

The Drug-Taking Confidence Questionnaire (DTCQ; Carpenter, 2006) was adapted and used to assess the level of substance abuse. This self-report questionnaire consists of 30 items. Participants were asked to indicate how confident they were that they could resist using alcohol or drugs and other substances in the described situations on a 5-point Likert scale, ranging from not at all confident (1) to completely confident (5). Subscale scores were calculated by summing all items within the subscale (original scores). Higher scores indicate that the respondent was more confident in resisting the urge to use substances in a given situation while low score indicated the reverse. The instrument measured socioeconomic status of individuals through their parents' profession, educational level, residence and types of equipment in the house. The instrument comprises of 12 items in this order: 1-4 focus on participants' bio data, with 5-12 focusing on the parent's occupation, educational level, residence and type of equipment in the house. The scoring pattern for parents' occupation: 1-10 points; educational level 1-14 points; parents' residence: 1-6 points; types of houses: 1-3 points and equipment in the house: 1-27 points. The maximum point is 60, which is further divided by three (3) parts: lower socioeconomic status (0-15 points), middle socioeconomic status (16-40 points), and high socioeconomic status (41-60 points). The instrument was administered before and after the respondents were treated, the control group was given placebo on personal hygiene.

There were three treatment packages namely:

- Cognitive behavioural therapy (CBT). The objective of the programme was to help participants abstain from substance abuse. The various tenets of CBT in helping clients overcome substance abuse were the activating events, their belief system towards an event and the consequences as reflected in the behavioural disposition. Training skills and critical task were given to participants in getting them involved in the treatment programme.

- Motivational interviewing Therapy (MIT). It focused on exploring and resolving ambivalence, and centred on motivational processes within the individual to facilitate the needed change. The counsellor evoked the clients' thoughts and ideas rather than imposing his own ideas and motivations on the clients to change, with the client concentrating and focus on times changes were made to stop substance abuse.
- Control group. The participants in the control group received a placebo which was on hygiene.

The researchers met each group twice a week for six weeks (two sessions per week). The groups were tagged A, B and C. Group A received the CBT treatment; Group B received the MIT treatment while Group C received placebo on hygiene. The three groups were pre-tested by administering the same instrument used for the post-test after which their results were compared at the end of the treatment procedure.

Ethical approval was obtained from the principals of the schools used as well as the respective class teachers of the randomly selected classes. The consent of all respondents was obtained and participation of all respondents was voluntary. All the respondents were assured of confidentiality and anonymity.

Presentation of results

Ho1: There is no significant interaction effect of parental socio-economic status on Cognitive Behavioural Therapy, Motivational Interviewing Therapy and the Control groups of adolescents with substance use.

Table 2: Mean and standard deviation in interaction effect of parental socio-economic status on post-test mean scores of experimental and control groups

Group	PSES	N	Mean	Std. Deviation
Control	High	14	97.07	38.99
	Middle	6	87.17	20.91
	Low	20	98.40	37.22
CBT	High	35	49.43	16.76
	Middle	5	54.20	24.55
	Low	26	49.96	22.51
MIT	High	15	59.80	26.99
	Middle	4	66.50	19.84
	Low	19	61.00	23.91

Table 2 shows that fourteen adolescents of high PSES in control group have a mean of 97.07 and a standard deviation of 38.99; six adolescents of middle PSES in control group have a mean of 87.17 and a standard deviation of 20.91; twenty adolescents of low PSES in control group have mean score of 98.40 and a standard deviation of 37.22. In the CBT group, thirty-five adolescents of high PSES have a mean of 49.43 and a standard deviation of 16.76; five adolescents of middle PSES exposed to CBT have mean of 54.20 and a standard deviation of 24.55; twenty-six adolescents of low PSES exposed to CBT have a mean of 50.00 and a standard deviation 19.51. More so, fifteen adolescents of high PSES exposed to MIT have a mean of 59.80 and a standard deviation of 26.99; four adolescents of middle PSES exposed to MIT have a mean of 66.50 and a standard deviation 19.84; nineteen adolescents of low PSES exposed to MIT have a mean of 61.40 and a standard deviation 23.91.

Table 3: ANCOVA showing interaction effect of parental socio-economic status on post-test scores of experimental and control groups

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	56256.413	9	6250.713	8.952	.000
Intercept	62871.443	1	62871.443	90.042	.000
PRETEST	1015.819	1	1015.819	1.455	.230
Group	16052.649	2	8026.325	11.495	.000
PSES	89.950	2	44.975	.064	.938
Group * PSES	784.145	4	196.036	.281	.890
Error	93564.476	134	698.242		
Total	772868.000	144			
Corrected Total	149820.889	143			

.890 > .05 = Not Significant

Table 3 shows a group by parental socio-economic status interaction F-value of .281 and a p-value of .890, testing at an alpha level of .05. The p-value is greater than the alpha level, hence the null hypothesis which states that "there is no significant interaction effect of parental socio-economic status on cognitive behavioural treatment, motivational interviewing treatment and control group means scores of adolescents with substance use" is retained. Meaning the treatment for managing adolescents with substance use is equally effective irrespective of parental socio-economic status.

Discussion of the findings

The findings of this study on the interactive effect of parents' socio-economic status on the efficacy of CBT and MIT in managing substance abuse among the different categories of low,

middle and high socio-economic status show that there is no significant difference in the efficacy of the treatment. Also, the CBT group at all levels of socio-economic status (high, middle and low) is the lowest compared to other treatments from this study. Earlier, studies by Adegunju et al. (2024) and Foo et al. (2012), reported that socio-economic challenges faced by parents significantly increase the likelihood of adolescent substance use, while their drug use can be significantly impacted by their family's economic stability; including where they live (Jalilian et al., 2015), which is an underlining component that predicts parents' socioeconomic status.

Conclusion

On account of the high prevalence rate of substance abuse by the teeming adolescent population, especially the senior secondary school adolescents, the study revealed no significant difference in the efficacy of the treatments by parents' socio-economic status be it high, middle and low. Meaning irrespective of parents' socio-economic status, the treatments acted equally when it comes to the issue of substance abuse amongst secondary school students in Edo state, Nigeria. These therapies should be major psychological interventions for managing substance abuse; irrespective of these secondary school students parents' socio-economic status, they should be given equal attention when it comes to substance abuse treatments

Recommendations

1. Irrespective of parent's socio-economic status, parents, siblings and peers of adolescents should be exposed to the dangers of substance abuse and help direct adolescents in having first-hand information on the negative impact of substance abuse and how it should be avoided.
2. Students should undergo guidance services as a preventive measure against substance abuse, and sensitisation seminars should be organised regularly to educate adolescents as well as other vulnerable individuals on the proper ways of handling addictive substances.

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