

RESEARCH ARTICLE

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The role of spirituality and religiosity in psychoactive substance use among adolescents in a Nigerian Hospital

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Submitted: 13th May 2022

Accepted: 24th August 2022

Published:

[ID](#): Orcid ID

Abstract

Objective: Adolescence is a transition period where drug experimentation is common. Spirituality and religiosity have been recognized by literature as having a possible role in stabilizing good physical and mental health. To compare the religiosity and spirituality among adolescents abusing a psychoactive substance and those not abusing psychoactive substances in a Nigerian hospital

Methods: This was a cross-sectional descriptive study conducted among adolescent patients admitted to the drug rehabilitation unit and adolescents attending the General Outpatient Department of the ABUAD Multisystem Hospital, Ado-Ekiti. The Daily Spiritual Experience Scale and Centrality of Religiosity Scale were used

Results: The prevalence of high religiosity and spirituality among the respondents was 57.9% and 56.1%. The prevalence of high religiosity and spirituality among respondents not abusing psychoactive substances was 62.9% and 62.6% respectively, while the level of high spirituality and religiosity among respondents abusing psychoactive substances was 53.0% and 49.1% respectively. A significant proportion of the respondents who had a low level of religiosity (55.9%) abused psychoactive substances than respondents who do not abuse psychoactive substances (45.7%) ($X^2=7.694$ $p=0.006$). Similarly, more proportion of respondents who had a low level of spirituality (57.4%) abused psychoactive substances than respondents who do not abuse psychoactive substances (44.2%). The observation is statistically significant ($X^2=11.1$, $p<0.001$). In addition, there was a significant positive correlation between the spirituality and religiosity scores among the respondents ($r=0.50$, $p<0.001$)

Conclusion: Psychoactive drug use among the respondent was associated with both low religiosity and spirituality. Therefore, religious activities should be encouraged among adolescents.

Keywords: Adolescents, Religiosity, Spirituality, Psychoactive Substance Use.

Plain English Summary

The level of religious activities, spiritual experience, and internal connection with a higher being relates to the use of psychoactive. There is a need to explore this concept in the prevention and treatment of adolescents with substance use disorders.

Background

Adolescence is a significant period in terms of biological and mental development (1). It is

generally during this time that young people begin to display a heightened level of awareness of the novel changes happening to their bodies and

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minds (2). Authors have suggested that adolescence is a critical risk period for the initiation of substance use with an expected peak between the ages of 18 to 25 (3-5). All through this phase, adolescents have a strong predisposition to trialing, curiosity, and susceptibility to peer pressure, rebellion against authority, and poor self-worth, which makes such individuals vulnerable to drug abuse (6). The basic development process generally involves changing relations between the individual and the multiple levels of the context within which the young person is accustomed. Drug abuse is a global problem with irredeemable damage among them (7). About 14% of the total health burden in young adults is caused by alcohol and drug abuse. Younger people are also more likely to die from substance use disorders through suicide, homicide, accident, and sickness (8-10). There is a growing interest in addressing spirituality and religion in health care, with evidence emerging that personal spiritual and religious practices, and support of these by practitioners, can influence mental health in a positive way (11). Spirituality is understood, in this context, as a search for connectedness and meaning, transcendence, and belonging while religion is conceptualized as the outward practice of spiritual beliefs situated in a particular organized religion (11). The phenomenon of spirituality lacks professional understanding regarding practice and research implications (11). Many health care providers rarely discuss the concept of spirituality with their patients because of the lack of clarity about spirituality and religion (12).

The Latin word 'spiritus' is the foundation of the word 'spiritual', meaning 'to blow or breathe', and 'to give life to the soul' (13). It also means a journey, or pursuit for truth (14). A study reported that the theory of spirituality had 13 conceptual components; among which, divine existence and connection were the furthest referenced conceptual components (15). The eight steps concept analysis conducted by another study built-in immateriality as one of the terms associated with spirituality (16). The literature revealed different synonyms for this concept such as personal meaning, purpose, values, beliefs, and personal connectedness, connectedness to others, connectedness to the surrounding, and connectedness to God, or a Supreme Being (15-17).

Spirituality is psychological with numerous expectations. It is an interconnection of something beyond and connecting something

within ourselves (17-18) and individuals understand their spirituality in different ways through the practice of a certain religion (16, 17, 19, 20). Spiritual people love others and unite with others and the complex power of God. Health and well-being are attained by maintaining a sound spirit and a healthy spirit is achieved through a healthy lifestyle and connectedness with the higher power or God (17, 20).

Religious practices such as rituals and living by certain religious values express spirituality (18, 21, 22). A grounded theory approach to developing a theoretical framework on spiritual assessment and practice shows different definitions of spirituality and religiosity (23). Religion is ascribed to traditional values and practices related to certain groups of people or faiths. A religious person is associated with a particular belief, God, sacred scriptures, values, and ethics (16, 18).

Culture plays a significant role in religion (18) unlike spirituality; religion is directed by tradition, rules, and thoughtful objectives (16). Spirituality may or may not involve religion (23). Another study defined religion as a "sentiment of learned behaviors and social expressions that reflect cultural values (24). Religion is more limited than spirituality and is often referred to as prayer, religious activities, and seeking spiritual guidance (22). Spirituality requires personal experience and changes in the heart while Religion involves coding and conceptualizing that experience. Religious identification requires that members of the group are driven to follow a certain set of rules, which control and enable group behavior (25).

Substance use disorders are an important public health problem with a multi-factorial etiology and limited effective treatment options (26) within this context, spirituality-based modalities may provide remarkable and beneficial opportunities in managing substance use disorders (27). This kind of intervention can have positive effects in alleviating some core symptoms associated with substance use, such as aggressiveness. A commonly existing intervention for alcohol use disorders is Alcoholics Anonymous (AA), which can be seen as a spirituality-based intervention (28). Both spirituality and religiosity are of interest in the addiction field as they are pivotal to some recovery pathways (29). Yet little is known overall about spirituality and religiosity identification among people in recovery including the role these play in aiding recovery (30).

Although the specific aspects of religiosity and spirituality that may influence recovery from

addiction are currently unclear, many community-based approaches, such as the 12 Steps and 12 Traditions of Alcoholics Anonymous, are based on the premise that addiction is a spiritual, as well as a medical disorder, and that recovery is dependent upon surrender to a higher power (31).

The literature is abounding with studies that have demonstrated the undeniable role of spirituality and religiosity in achieving and maintaining good physical and mental health (32). It is beneficial to have a practical understanding of the concept of spirituality and religiosity as a necessary precondition for defining the potential roles they play in health, whether physical or mental. Religiosity is not limited to individuals who hold particular religious beliefs alone, but also involves the day-to-day practice of these beliefs (33-34).

It is imperative to understand the significance of religiosity and spirituality among adolescents with drug abuse to overcome the menace of drug use among adolescents. There is also a dearth of studies on the association between the level of spirituality, religiosity, and drug use among adolescence in Nigeria. Hence, the need for this study.

The study aimed to compare religiosity and spirituality among adolescents abusing psychoactive substances and those not abusing a Nigerian hospital. The specific objectives were (a) to compare the prevalence of low-level religiosity and spirituality among adolescents abusing psychoactive substances and those not abusing psychoactive substances in a Nigerian hospital and (b) to determine the relationship between religiosity, spirituality, and drug abuse among adolescents.

Methods

Study Design

This was a comparative cross-sectional descriptive study

Study instruments

The Daily Spiritual Experience Scale

The Daily Spiritual Experience Scale (DSES) is a 16-item self-report measure designed to assess ordinary experiences of connection with the transcendent in daily life. It includes constructs such as awe, gratitude, mercy, sense of connection with transcendent and compassionate love. It also includes measures of awareness of discernment/inspiration and a sense of deep inner peace. Originally developed for use in health studies, it has been increasingly used more widely in the social sciences, for

program evaluation, and for examining changes in spiritual experiences over time. Also, it has been used in counseling, addiction treatment settings, and religious organizations (35).

It quantifies experiences of relationship with, and awareness of, the divine or transcendent and how beliefs and understandings form part of moment-to-moment features of life from a spiritual or religious standpoint (35 36). Conceptual underpinnings and psychometrics are described in the original paper on the scale (35) Cronbach's alpha's for the scale in English and in translation, have been consistently high, 0.89 and above (14), for example, 0.94 and 0.95 for the General Social Survey samples (37). The scale has been validated and used by authors in Nigeria (38-40). In this study, many times a day, Every day, most days, some days, once in a while, never or almost, and never were scored five, four, three, two, one, and zero for all the questions respectively. In question 16, not close, somewhat close, very close, and as close as possible were scored zero, one, two, and three respectively. The score of each question was added together, and a maximum score of 78 marks was obtainable for respondents who score below 50% of the total score (41) were classified as low spirituality while those that scored average and above were described as high spirituality.

The Centrality of Religiosity Scale

The Centrality of Religiosity Scale (CRS) is an instrument developed by Huber to measure the centrality, importance, or salience of religious meaning in personality that has been applied yet in more than 100 studies in the sociology of religion, psychology of religion, and religious studies in 25 countries within total more than 100,000 participants (42-43). It measures the general intensities of five theoretically defined core dimensions of religiosity. The dimensions of public practice, private practice, religious experience, ideology, and intellectual dimensions can together be considered representative of the totality of religious life (42). It consists of 15 items rated on a 5-point Likert-type scale. The developers obtained a Cronbach's alpha of 0.78. A pilot study among Nigerian undergraduates yielded a Cronbach's alpha of 0.89 (44). The instrument has been successfully deployed by other researchers in Nigeria (45-46).

In this study, an option very often, often, occasionally, rarely, and never were scored five, four, three, two, and one respectively for questions 1, 2, 5, 10, 11, and 15 while several times a day, once a day, more than once a week,

once a week, one to three times a month, a few times a year, Less than a few times a year and never were scored eight, seven, six, five, four, three, two, one respectively on questions 3, 4 and 14. In addition, very much, so quite a bit, moderately, not very much, and Not at all were scored five, four, three, two, and one respectively on questions 6,7,8,9, 12, and 13. The score of each question was added. A maximum score of 76 marks is obtainable. The respondent who scores below the average score (50%) which was 38 were classified as having low religiosity while those that scored average and above were described as having high religiosity.

Study procedure

The study was conducted among adolescent patients (14-19 years) admitted to the Rehabilitation Unit of the Department of Mental Health and adolescents (14-19 years) who tested negative for drug toxicology with no lifetime history of psychoactive drug use attending the General Outpatient Department of the ABUAD Multisystem Hospital, Ado-Ekiti, Ekiti State. Respondents abusing psychoactive substances were described as those using psychoactive substances substantively to cause either medical, social, or legal complications. The study was a comparative cross-sectional descriptive one. The adolescent patients admitted to the Rehabilitation Unit of the Mental Health Department and the adolescent patient corresponded with age and gender attending the General Out-Patient Department of the ABUAD Multisystem Hospital, Ado Ekiti in Ekiti State, Nigeria were selected for the study until the desired sample size was collected. The respondents were approached in the clinic or on the ward; a detailed explanation of the study was given. Respondents or parents that gave informed Consent were recruited. The research instruments were administered to the respondents by the researchers and research assistants who were previously trained in the administration and collection of questionnaires. The inter-rater reliability was 0.81.

Sample size

The sample size for this study was computed by using the formula below (47).

$$n = \frac{Z^2 pq}{d^2}$$

Where, n= the desired sample size if the population is more than 10,000.

Z =the standard normal deviate usually set at 1.96 corresponding to a 95% confidence interval
p = the proportion in the target population estimated to have a particular characteristic

p = the proportion in the target population estimated to have a particular characteristic is 31.2%

$$q = 1 - p$$

d = degree of accuracy desired set at 0.05

A study found that the prevalence of current use of psychoactive substances among adolescents was 31.2% (48).

Therefore P = 0.312 q= 1-0.312=0.688 d is set at 0.05

$$\begin{aligned} \text{Therefore } N &= \frac{1.96 \times 1.96 \times 0.312 \times 0.688}{(0.05)^2} \\ N &= \frac{3.842 \times 0.215}{0.0025} \\ &= 330.41 \end{aligned}$$

By adding a 10% attrition rate (33) the minimum sample size required came to approximately 364

Data Analysis

The Statistical Package for Social Sciences (SPSS version 21) was used for data analysis. The socio-demographic details of respondents were reported using descriptive statistics such as frequency, Chi-square test, and Pearson correlations were used as appropriate. The confidence interval was set at 95%. Statistical significance will be considered at a p-value of less than 0.05.

Results

A total number of 770 respondents who were admitted to the rehabilitation ward or attended the General Outpatient department between October 2020 and April 2022 were selected, 385 each from respondents abusing drugs and respondents not abusing a psychoactive substance.

Socio-demographic variable among the respondents

The majorities of the respondents (74.8%) were above 15 years with a mean age of 16.6 ±1.6 years, male (78.2%), from the Ibo tribe (80.3%), and Christians (80.5%), and have psychological support (88.7%). Most of the respondents don't have a history of medical problems (81.3%) (Table 1).

Table 1 Sociodemographic Variable among the Respondents

| Variable | Respondents abusing psychoactive substances (n) | Respondents not abusing psychoactive substances (n) | Total Respondents (n) | Percentage (%) |
|---|---|---|-----------------------|----------------|
| Age Category | | | | |
| Less than 15years | 97 | 97 | 194 | 25.2 |
| 15 years and above | 288 | 288 | 576 | 74.8 |
| Gender | | | | |
| Male | 301 | 301 | 602 | 78.2 |
| Female | 84 | 84 | 168 | 21.8 |
| Tribe | | | | |
| Yoruba | 41 | 41 | 82 | 10.6 |
| Ibo | 309 | 309 | 618 | 80.3 |
| Hausa | 35 | 35 | 70 | 9.1 |
| Religion | | | | |
| Christianity | 310 | 310 | 620 | 80.5 |
| Islam | 60 | 60 | 120 | 15.6 |
| Traditional Religion | 15 | 15 | 30 | 3.9 |
| Do you have the necessary psychological support from the family? | | | | |
| No | 44 | 44 | 88 | 11.3 |
| Yes | 341 | 341 | 682 | 88.7 |
| History of medical disorder(s) | | | | |
| No | 323 | 323 | 626 | 81.3 |
| Yes | 122 | 122 | 144 | 18.7 |

Table 2 revealed that the prevalence of high religiosity and spirituality among the respondents was 57.9% and 56.1%. The prevalence of both high religiosity and spirituality among respondents not abusing psychoactive substances was 62.9% and 62.6% respectively, while the level of both high spirituality and religiosity among respondents abusing psychoactive substances was 53.0% and 49.1% respectively (Tables 3 and 4).

Table 2. The Prevalence of Religiosity and Spirituality among the Respondents

| | Frequency (n) | Percentage (%) |
|---------------------|---------------|----------------|
| Religiosity | | |
| Low | 326 | 42.1 |
| High | 446 | 57.9 |
| Spirituality | | |
| Low | 338 | 43.9 |
| High | 432 | 56.1 |

Table 3. The Prevalence of Religiosity and Spirituality among Respondents abusing Psychoactive Substances

| | Frequency (n) | Percentage (%) |
|---------------------|---------------|----------------|
| Religiosity | | |
| Low | 181 | 47.0 |
| High | 204 | 53.0 |
| Spirituality | | |
| Low | 194 | 50.4 |
| High | 191 | 49.6 |

Table 4 - The Prevalence of Religiosity and Spirituality among Respondents not abusing Psychoactive Substances

| Variable | Frequency (n) | Percentage (%) |
|---------------------|---------------|----------------|
| Religiosity | | |
| Low | 143 | 37.1 |
| High | 243 | 62.9 |
| Spirituality | | |
| Low | 144 | 37.4 |
| High | 241 | 62.6 |

A significant proportion of the respondents who had a low level of religiosity (55.9%) abused psychoactive substances than respondents who do not abuse psychoactive substances (45.7%). The observation is statistically significant ($X^2=7.694$ p value =0.006) (Table 5). Similarly,

more proportion of respondents who had a low level of spirituality (57.4%) abused psychoactive substances than respondents who do not abuse psychoactive substances (44.2%). The observation is also statistically significant ($X^2=11.1$, p-value<0.001) (Table 6).

Table 5 - Association between Religiosity and Drug Use among the Respondents

| Variable | Drug use absent n (%) | Drug use present n (%) | X^2 | df | p-value |
|------------------|--------------------------|---------------------------|-------|----|---------|
| Religiosity Low | 143(44.1%) | 181(55.9%) | 7.694 | 1 | 0.006 |
| Religiosity High | 242(54.3%) | 204(45.7%) | | | |

Table 6: The Association between the Level of Spirituality and Drug Use among the Respondents

| Variable | Drug use absent n (%) | Drug use present n (%) | X^2 | df | p-value |
|-------------------|--------------------------|---------------------------|-------|----|---------|
| Spirituality Low | 144(42.6%) | 194(57.4%) | 11.1 | 1 | < 0.001 |
| Spirituality High | 241(55.8%) | 191(44.2%) | | | |

Marijuana (23.9%) and Alcohol (16.0%) were the most commonly used psychoactive substance among all the respondents and there was a

significant positive correlation between spirituality and religiosity scores among the respondents ($r =0.50$, $p<0.001$).

Discussion

Prevalence of religiosity and spirituality among the respondents

The proportion of high levels of religiosity and spirituality among the respondents was a little lesser than the 95% of American adolescents who believed in God (49-50), 75% who regarded themselves as members of a religion, and 60% who viewed spirituality as important despite the recent increase of religious activities among religious bodies (49). There has been an obvious proliferation of different brands of religious groups, particularly in Nigeria over the last two decades. This unprecedented development has been described as religious growth (51). There was a synonymous increase in spirituality and religiosity levels among the respondents. This implies that their religious activities incorporate an awareness of being connected to something bigger than themselves, as well as something akin to a search for meaning in life.

Religiosity and spirituality among respondents abusing drugs

The inverse relationship between increased religiosity and deviant behavior has been reported (52). The level of both religiosity and spirituality was lower among respondents abusing a psychoactive substance compared to those not doing so. The observation was similar to a study that demonstrated that religiosity, was inversely associated with substance abuse (1). It went further to highlight that social bonding variables played a key role in mediating this negative relationship between the two. Another study has reported that the extent of the negative association between religiosity and substance abuse is on average twice as great among adolescents in comparison with adults (2). A 33% to 41 % decreased likelihood of substance dependence or abuse and a 47% to 50% decreased likelihood of substance use was linked with the increase in personal devotion. Similarly, a 35% decreased likelihood of alcohol

dependence or abuse and a 17% to 42% decreased likelihood of substance use was found to be associated with an increase in institutional conservatism. Personal dogmatism was also reported to be inversely associated with alcohol use (53). According to research done in the United States, adults who attend religious services more frequently and hold more salient religious beliefs were noted to exhibit lower rates of medical and recreational marijuana use (54). Several compelling theories have been proposed to attempt to explain why religious involvement might be associated with lower rates of substance use. According to the socialization perspective, involvement in religious institutions exposes adherents to specific moral directives and general religious doctrines that are recommended by the authority of religious traditions and sacred texts. Continuous exposure may then induce the internalization of specific religious messages that essentially discourage substance use and abuse (55). In addition, many religious assemblies adhere to general religious ideologies that sanctify the body and emphasize the importance of physical health as a means of religious commitment. For instance, the scripture suggesting that the "body is the temple of the Holy Spirit" may be invoked to discourage adherents from certain health-relevant behaviors such as tobacco smoking, alcohol consumption, illicit drug use, as well as risky sexual behaviors (56).

The authority perspective on the other hand suggests that religiosity may deter substance use by promoting general obedience to authority, compliance with societal norms, and deference to societal laws. Several biblical passages and other holy books direct adherents to submit to various "authorities" and "ordinances". For example, Romans 13:1-2 admonishes: "Let every soul be subject to the governing authorities. For there is no authority except God, and the authorities that exist are appointed by God. Therefore whoever resists the authority resists the ordinance of God, and those who resist will bring judgment on themselves."

There is a tendency that people who are active within religious institutions may favor conformity based on the fear of divine retribution, guilt avoidance, and internalized moral codes. This may be further reinforced in the social context of obedient peer networks (57). Based on the above, people with a high level of religiosity may be more likely to conform to laws prohibiting the use of illicit substances, as well as the use of prescription drugs in non-prescribed manners.

The control perspective postulates that religious involvement may potentially minimize the risk of substance use through processes related to social control and social support. In the context of frequent religious attendance, there is an increase in opportunities for regular contact with adherents, which could expose the potential for behavioral monitoring, detection of counter-normative behavior, as well as possible social consequences, either directly or indirectly (58). For example, gossip, ostracism, and formal punishments. This serves to elevate the costs (actual and perceived) associated with substance use, which then presumably prohibits access and use. Similarly, there is a real possibility that religious involvement reduces substance use by placing individuals in reference groups that tend to espouse anti-substance use norms and exhibit low levels of substance use and high rates of abstinence (54). Religious involvement may also induce reduced levels of substance use among members through supportive relationships with other members of the group (59). Religious involvement exposes members to a wider and more diverse social network, with more contact with other members, more extensive family ties, and more types of social support (60). It is believed that larger social networks, most importantly those consisting of adherents of similar religious leanings, may discourage marijuana use by the provision of informational, emotional, and instrumental support. Finally, the self-regulation perspective proposes that religious involvement may predispose people to lower levels of substance use by promoting self-control and generic self-regulatory capacities (41).

Low spirituality has been associated with drug use similar to the finding in this study (61). Spirituality is a construct that has recently gained currency among clinicians because of the perceived role in the promotion of meaningfulness in recovery from addiction (30). The relationship between spirituality and drug use is becoming more and more apparent, as study after study continues to suggest that there is a significant correlation between engaging in spiritual and religious activities and a positive change in high-risk behaviors (62).

However, there is the possibility that drug use and spirituality are not negating; under some circumstances; drug use may be entheogenic, inducing or facilitating spiritual experiences (a property not limited to the classes of drugs traditionally used in religious rites, and

sometimes seen with stimulants such as amphetamine (28).

Strength and Limitations

To the best of our knowledge, this study is the first to compare religiosity and spirituality among adolescents abusing psychoactive substances and those not abusing psychoactive substances in southwest Nigeria however it is a cross-sectional and descriptive one, thus assertions cannot be made concerning cause and effect. Besides, the questionnaire method assumes that the respondent will answer each question truthfully which may not be completely so.

Conclusion

The significant decline in the level of spirituality and religiosity among the respondents abusing psychoactive substances compared with the general population may be of both preventive and therapeutic value in addiction medicine. Therefore, religious and spiritual training should be incorporated into the academic curriculum and drug rehabilitation program.

Declarations

Declarations, Ethics approval, and Consent to Participate

Ethical approval was obtained from the Ethics and Research Ethics Committee of the ABUAD Multisystem Hospital Ado Ekiti (AMSH/CMD/EC/012). Participation was voluntary, and informed consent was obtained from participants who were 18 years and above while the primary caregiver (parents) of respondents below 18 years gave informed consent.

Consent for publication

All the authors gave consent for the publication of the work under the creative commons Attribution-Non-Commercial 4.0 license.

Availability of data and materials

The data and materials associated with this research will be made available by the corresponding author upon reasonable request.

Competing interests

The authors declare no potential conflicts of interest concerning the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Authors' Contributions

FJ: Conception or design of the work; data analysis, or interpretation of data for the work.

MAF: Conception or design of the work; interpretation of data for the work.

OAH: Conception or design of the work; editing of the manuscript.

FOO: Conception or design of the work; editing of the manuscript.

Acknowledgement

I acknowledge the Hospital management and all the members of staff for the opportunity to conduct the research.

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