Impulsivity and Health Risk Behavior Among Tertiary Healthcare Practitioners in Benue State, Nigeria

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Abstract
This study investigated impulsivity as a predictor of health risk behaviour among tertiary healthcare practitioners in Benue State, Nigeria. The study was anchored on the Urgency Model of Impulsivity and adopted a cross-sectional survey design. A sample of 341 healthcare practitioners was selected from three tertiary healthcare institutions in Benue State, namely Federal Medical Centre, Makurdi; Benue State University Teaching Hospital, Makurdi; and Federal University of Health Sciences Teaching Hospital, Otukpo. A multistage sampling technique involving purposive, stratified and simple random sampling procedures was employed. Data were collected using the Barratt Impulsiveness Scale (BIS-11) and the Health Risk Behaviour Inventory (HRBI). The instruments were subjected to a pilot study involving 103 healthcare practitioners at Federal University Teaching Hospital, Lafia. Multiple regression analysis was used to test the hypothesis at the .05 level of significance. The findings revealed that impulsivity significantly predicted health risk behaviour, with the five dimensions jointly

accounting for a reported 99.5% of the variance in health risk behaviour. Specifically, motor impulsivity, non-planning impulsivity and emotional impulsivity made significant positive independent contributions, while cognitive impulsivity and attention impulsivity made significant negative independent contributions. The findings suggest that difficulties with behavioural control, planning and emotional responses may be associated with health-compromising practices among healthcare practitioners. The study recommends institutional programmes that promote impulse control, reflective decision-making, emotional self-regulation and healthy lifestyle practices among healthcare practitioners.

Introduction

Healthcare practitioners play an important role in promoting health, preventing diseases and providing medical care to individuals and communities. Their professional responsibilities require them to make decisions, respond to emergencies, manage patients and maintain appropriate standards of clinical practice. These responsibilities often involve demanding schedules, high-pressure situations and continuous interaction with patients experiencing different health conditions. Although healthcare practitioners are expected to promote healthy living, their professional knowledge does not necessarily guarantee that they consistently engage in behaviours that protect their personal health. Health risk behaviour refers to actions or patterns of behaviour that increase an individual's vulnerability to illness, injury or other adverse health outcomes. Such behaviours include physical inactivity, unhealthy dietary practices, inadequate sleep, cigarette smoking, harmful alcohol consumption, illicit drug use and risky sexual practices. These behaviours may have immediate or long-term consequences for physical and psychological well-being. Among healthcare practitioners, engagement in health risk behaviour is particularly important because it may affect their personal health, occupational functioning and capacity to provide effective care. One psychological factor that may be associated with health risk behaviour is impulsivity. Impulsivity refers to a tendency to act rapidly, respond without adequate consideration and make decisions without sufficiently evaluating possible consequences. It involves difficulties with behavioural inhibition, planning, attention and the regulation of immediate responses. Individuals with high impulsivity may prioritise immediate gratification over long-term outcomes, thereby becoming more vulnerable to behaviours that compromise their health. Patton, Stanford and Barratt (1995) describe the Barratt Impulsiveness Scale as a measure of impulsive personality characteristics, including attentional, motor and non-planning dimensions. Motor impulsivity concerns acting without sufficient thought, while non-planning impulsivity reflects limited consideration of future consequences. Attentional impulsivity involves difficulties maintaining attention and concentrating on tasks. These dimensions provide a useful basis for understanding how individual differences in behavioural control may be associated with health-related decisions. Impulsivity may influence health risk behaviour because many health-related choices require individuals to delay immediate gratification and consider future consequences. For instance, a person who finds it difficult to control immediate urges may engage in harmful substance use, unhealthy eating or unsafe sexual practices despite being aware of their possible consequences. Similarly, limited planning may make it difficult to maintain regular exercise, adequate sleep and consistent preventive healthcare practices. In this regard, impulsivity may be relevant to understanding why some individuals engage in behaviours that are inconsistent with their knowledge of healthy living.

According to Whiteside and Lynam (2001), impulsivity is a multidimensional construct that involves different personality-related tendencies associated with poorly controlled behaviour.

Their explanation demonstrates that impulsivity should not be treated as a single, uniform characteristic. Different dimensions may relate to behavioural outcomes in different ways, depending on the nature of the behaviour and the circumstances in which it occurs. This distinction is important when examining health risk behaviour because the tendency to act without thinking may not operate in exactly the same way as difficulties with attention or future planning. Cyders and Smith (2008) further explain that individuals may act rashly when experiencing intense positive or negative emotions. Their account suggests that some impulsive behaviours are emotion-driven and may occur when individuals attempt to respond quickly to uncomfortable or highly stimulating emotional experiences. In the context of healthcare practice, practitioners may encounter demanding clinical situations, emotional pressure and difficult patient-related experiences. Individual differences in impulse control may therefore be relevant to how they respond to personal and occupational demands. The relationship between impulsivity and health risk behaviour has received attention in studies involving different populations. Megías-Robles et al. (2023), in their study of impulsivity and sensitivity to reward in health-related risk-taking among university students, reported that impulsivity dimensions were involved in explaining health-related risk-taking. Their findings suggest that emotion-related impulsivity and the tendency to respond to rewarding experiences may contribute to behaviours that expose individuals to health risks. Salehi et al. (2023) also examined impulsivity, inhibition and internet addiction among medical students in northern Iran. Their findings indicated significant positive relationships between impulsivity and problematic internet use. Although internet addiction represents a specific behavioural outcome, the study demonstrates the relevance of impulsive tendencies to behaviours that may interfere with personal well-being and everyday functioning. In Nigeria, Aluko et al. (2022) examined impulsivity and internet addiction among undergraduate students in Ogun State. Their findings indicated that impulsivity significantly predicted internet addiction. The study provides a Nigerian perspective on the relationship between impulsive tendencies and maladaptive behaviour. However, its focus on undergraduate students and internet addiction leaves room for further investigation among practising healthcare professionals and other forms of health risk behaviour.

Shah et al. (2025), in their study of substance use among healthcare professionals in Kenya, reported substance use among healthcare workers and highlighted its relevance as an occupational and public health concern. Although their study did not directly examine impulsivity, it demonstrates the importance of understanding factors associated with health-compromising behaviours among healthcare professionals. In Benue State, tertiary healthcare practitioners work within demanding healthcare environments where their responsibilities to patients may compete with their personal health needs. The three institutions considered in this study Federal Medical Centre, Makurdi; Benue State University Teaching Hospital, Makurdi; and Federal University of Health Sciences Teaching Hospital, Otukpo provide specialised healthcare services to residents of the state and surrounding communities. Practitioners in these institutions perform different professional duties and are expected to maintain appropriate standards of care while managing personal and occupational demands.

Despite their professional knowledge of disease prevention and healthy living, healthcare practitioners may experience difficulties maintaining healthy lifestyle practices. Their dietary habits, physical activity, sleep patterns, substance related behaviours and utilisation of preventive healthcare services may be associated with several psychological and occupational factors. Impulsivity is particularly relevant because it concerns the capacity to regulate immediate responses, consider future consequences and exercise behavioural control.

Although previous studies have examined impulsivity in relation to internet addiction, substance use and other forms of risk-taking, there remains a need for population-specific evidence concerning its relationship with broader health risk behaviour among tertiary healthcare practitioners in Benue State. Understanding this relationship may provide useful information for developing workplace interventions that promote impulse control and healthier behavioural practices. Against this background, the present study investigated impulsivity as a predictor of health risk behaviour among tertiary healthcare practitioners in Benue State, Nigeria.

Theoretical Framework

Urgency Model of Impulsivity

The study was anchored on the Urgency Model of Impulsivity proposed by Cyders and Smith (2008). The model explains impulsive behaviour as a tendency to act rashly when experiencing intense emotional states. It emphasises that some individuals are more likely to engage in poorly considered actions when they experience strong positive or negative emotions. The model identifies positive urgency and negative urgency as important dimensions of emotion-related impulsivity. Positive urgency refers to the tendency to act rashly when experiencing intense positive emotions, while negative urgency describes the tendency to act impulsively when experiencing intense negative emotions. According to Cyders and Smith (2008), individuals who experience these tendencies may find it difficult to regulate their behaviour when emotions become intense. Consequently, they may engage in actions that provide immediate satisfaction or relief without adequately considering possible long-term consequences.

The model is relevant to the present study because health risk behaviour may involve decisions made in response to immediate urges, emotional experiences or the desire for short-term gratification. For example, an individual experiencing emotional discomfort may resort to harmful substance use or unhealthy eating as an immediate response, despite being aware of the possible health consequences. Similarly, a person who has difficulty controlling immediate impulses may engage in risky behaviours without adequately considering their implications.

Among healthcare practitioners, the model provides a useful explanation of how emotional experiences and difficulties with behavioural control may be associated with personal health practices. Practitioners may encounter emotionally demanding situations in their professional responsibilities. Individual differences in how they respond to intense emotions may be relevant to their decisions concerning sleep, diet, substance use and other health-related behaviours.

One strength of the Urgency Model is that it recognises the role of emotional experiences in impulsive behaviour. It therefore provides an explanation for why individuals may engage in risky actions even when they understand the possible consequences. However, the model places particular emphasis on emotion-driven impulsivity and does not independently explain every dimension of impulsivity, such as attentional difficulties and limited future planning. Despite this limitation, it provides a useful theoretical foundation for examining impulsivity and health risk behaviour among tertiary healthcare practitioners in Benue State.

Hypothesis

The following hypothesis was tested at the .05 level of significance:

i. Impulsivity will significantly influence health risk behaviours among tertiary healthcare practitioners in Benue State, Nigeria.

Method

The study adopted a cross-sectional survey design. This design was considered appropriate because it allowed the researcher to collect information from healthcare practitioners at a particular point in time to examine the relationship between impulsivity and health risk behaviour without manipulating the study variables. The design also provided an opportunity to assess the predictive contributions of the dimensions of impulsivity to health risk behaviour.

Setting

The study was conducted in Benue State, Nigeria. The state is located in the North-Central geopolitical zone of Nigeria and is characterised by diverse ethnic groups, including the Tiv, Idoma and Igede. The study focused on three tertiary healthcare institutions: Federal Medical Centre, Makurdi; Benue State University Teaching Hospital, Makurdi; and Federal University of Health Sciences Teaching Hospital, Otukpo. These institutions provide specialised healthcare services to residents of Benue State and neighbouring communities.

Population

The population of the study comprised 2,447 healthcare practitioners across the three selected tertiary healthcare institutions in Benue State. Hospital records (2026) indicated that Federal Medical Centre, Makurdi, had 1,189 healthcare practitioners, Benue State University Teaching Hospital had 937, while Federal University of Health Sciences Teaching Hospital, Otukpo, had 321 healthcare practitioners. The population included doctors, nurses, medical laboratory scientists, pharmacists, community health workers and other allied healthcare professionals.

Sample and Sampling Technique

The sample size for the study was 341 healthcare practitioners. The sample size was determined using the Krejcie and Morgan (1970) sample size estimation table for known populations. A multistage sampling technique was adopted in selecting participants from the three tertiary healthcare institutions. At the first stage, purposive sampling was used to select the three tertiary healthcare institutions in Benue State. At the second stage, stratified sampling was employed to ensure representation of different professional categories, including doctors, nurses, pharmacists, medical laboratory scientists and community health workers. At the third stage, simple random sampling was used to select individual participants within the identified professional strata. This procedure was adopted to ensure that different categories of healthcare practitioners were represented in the study.

Instruments

A questionnaire comprising sections on demographic characteristics, compassion fatigue, impulsivity, emotion regulation and health risk behaviour was used for the original study. For the present article, attention was restricted to the measures of impulsivity and health risk behaviour.

Barratt Impulsiveness Scale (BIS-11)

The Barratt Impulsiveness Scale (BIS-11), attributed to Barratt (1965) in the study instrument description, was used to measure impulsivity among healthcare practitioners. The instrument consists of 30 items rated on a four-point Likert response format ranging from 1 (Rarely/Never) to 4 (Almost Always). It assesses impulsive characteristics through dimensions that include attentional, motor and non-planning impulsivity. The scale is widely used as a self-report

measure of impulsive personality traits. The study considered the dimensions of motor impulsivity, cognitive impulsivity, non-planning impulsivity, attention impulsivity and emotional impulsivity in examining the relationship with health risk behaviour.

Health Risk Behaviour Inventory (HRBI)

The Health Risk Behaviour Inventory developed by Booth (2000) was used to assess health risk behaviour among the participants. The inventory measures seven categories of health risk behaviour: physical inactivity, unhealthy diet, insufficient sleep, direct and indirect exposure to cigarette smoke, alcohol consumption, illicit drug use and risky sexual behaviours. Each subscale contains between nine and twelve items. Participants indicated the extent to which the statements reflected their actual behaviour over the preceding month using a five-point Likert response format ranging from 1 (Never True) to 5 (Always True). The original instrument was reported to have a Cronbach's alpha coefficient of .93, indicating satisfactory internal consistency.

Pilot Study

A pilot study was conducted among 103 healthcare practitioners at Federal University Teaching Hospital, Lafia (Darhatu Araf Specialist Hospital, Lafia). The exercise was carried out to establish the reliability and suitability of the research instruments before the main study. Data obtained from the pilot exercise were analysed using Cronbach's alpha to assess the internal consistency of the instruments. The pilot study provided an opportunity to examine the suitability of the questionnaire items and their administration among healthcare practitioners.

Data Collection Procedure

The researcher obtained an introductory letter from the Department of Psychology, Rev. Fr. Moses OrshioAdasu University, Makurdi, before proceeding to the selected tertiary healthcare institutions. Permission was obtained from the relevant hospital authorities, and two research assistants were trained on the purpose of the study, questionnaire administration, informed consent and confidentiality. Questionnaires were administered to eligible healthcare practitioners across the selected institutions. Participants were informed about the purpose of the research and their voluntary participation. They were also assured that the information supplied would be treated confidentially and used strictly for research purposes. Completed questionnaires were retrieved, checked for completeness and prepared for statistical analysis.

Data Analysis

Data were analysed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics, including frequencies, percentages, means and standard deviations, were used to summarise the participants' demographic characteristics and study variables. Multiple regression analysis was employed to test the hypothesis concerning the predictive influence of impulsivity on health risk behaviour. The analysis considered the independent contributions of motor impulsivity, cognitive impulsivity, non-planning impulsivity, attention impulsivity and emotional impulsivity. All inferential analyses were interpreted at the .05 level of significance.

Results

Hypothesis One

The hypothesis stated that impulsivity will significantly influence health risk behaviours among tertiary healthcare practitioners in Benue State, Nigeria. This hypothesis was tested using

multiple regression analysis, with motor impulsivity, cognitive impulsivity, non-planning impulsivity, attention impulsivity and emotional impulsivity entered as predictors of health risk behaviour. The findings are presented in Table 1.

Table 1
Summary of Multiple Regression Showing Influence of Impulsivity on Health Risk Behaviors among Tertiary healthcare practitioners in Benue State

Predictor Variable	R	R^2	df	F	β	t	Sig
Constant	.997	.995	334	1249.544		2.327	.021
Motor impulsivity					.878	52.284	.000
Cognitive impulsivity					-.069	-2.104	.036
Non-planning					.228	7.424	.000
Attention					-.120	-3.222	.001
Emotional					.078	2.062	.040

R = .997, R^2 = .995, Adjusted R .995

The result presented in Table 1 above showed that there was a significant influence of impulsivity on Health Risk Behaviors among Tertiary Healthcare practitioners in Benue State R = .997, R^2 = .995. F (5, 334) = 1249.544, P< .01]. This result showed that impulsivity (Motor impulsivity, Cognitive impulsivity, Non-planning, Attention and Emotional) made a positive contribution of 99.7% to the total variance in risky health behaviors. This means that health practitioners who score high on impulsivity had risky health behaviors, while those who score low on impulsivity did not have risky health behaviors. Furthermore, the results indicated that, independently, motor impulsivity (β = .878, P>.01), non-Planning (β = .228, P> .01), and emotional impulsivity (β = .078, P> .01), while cognitive impulsivity (β= -.068, P<01) and attention (β = -.120, P<.01) did not make a positive contribution to risky health behaviors, as shown above. Based on this result, the hypothesis is therefore confirmed.

Discussion of Findings

The hypothesis examined whether impulsivity significantly predicted health risk behaviour among tertiary healthcare practitioners in Benue State, Nigeria. The findings revealed that impulsivity significantly predicted health risk behaviour. The five dimensions considered in the analysis jointly accounted for a reported 99.5% of the variance in health risk behaviour. Specifically, motor impulsivity, non-planning impulsivity and emotional impulsivity made significant positive independent contributions, whereas cognitive impulsivity and attention impulsivity made significant negative independent contributions. The positive contribution of motor impulsivity suggests that acting without sufficient consideration may be associated with health-compromising decisions among healthcare practitioners. Individuals who respond quickly to immediate urges may be less likely to pause and evaluate the possible consequences of their actions. In relation to health practices, this may be reflected in decisions involving unhealthy dietary choices, substance use, inadequate sleep or other behaviours that provide immediate satisfaction but may have adverse long-term consequences. The finding therefore suggests that the ability to regulate immediate responses may be relevant to maintaining healthy behavioural practices. The finding is consistent with Megías-Robles et al. (2023), who reported that impulsivity dimensions, particularly emotion-related urgency and sensation seeking, helped explain health-related risk-taking among university students. Their findings demonstrate that

impulsive tendencies may be involved in decisions that expose individuals to health risks. Although their study involved university students rather than practising healthcare professionals, it provides support for the relevance of impulsivity to health-related behaviour.

The positive contribution of non-planning impulsivity further suggests that limited consideration of future consequences may be associated with health risk behaviour. Healthcare practitioners who experience difficulties with planning may find it challenging to maintain consistent health routines, particularly when their professional responsibilities compete with personal needs. Regular physical activity, adequate sleep, healthy eating and preventive medical care often require deliberate planning and sustained commitment. When future consequences receive insufficient consideration, immediate demands or preferences may take priority over healthy practices. This finding is consistent with the multidimensional perspective of impulsivity described by Whiteside and Lynam (2001). Their account recognises that different impulsive tendencies may contribute to behavioural outcomes through distinct pathways. The present finding indicates that the tendency to act without adequate consideration of future consequences may be particularly relevant to health risk behaviour among the healthcare practitioners studied.

The significant positive contribution of emotional impulsivity also suggests that emotionally driven responses may be associated with health risk behaviour. Cyders and Smith (2008), through the Urgency Model of Impulsivity, explained that some individuals are more likely to act rashly when experiencing intense positive or negative emotions. This may help explain why individuals sometimes engage in behaviours that provide immediate emotional relief or gratification despite their possible adverse consequences. Among healthcare practitioners, emotional demands arising from professional and personal experiences may make effective impulse control important for maintaining healthy behavioural practices.

The finding also agrees with the study by Aluko et al. (2022), which reported that impulsivity significantly predicted internet addiction among undergraduate students in Ogun State, Nigeria. Although internet addiction is not identical to the broader health risk behaviours examined in the present study, the finding provides evidence that impulsivity may be associated with maladaptive behavioural patterns in a Nigerian population. The present study extends this area of inquiry by examining health risk behaviour among tertiary healthcare practitioners.

Similarly, Salehi et al. (2023) found significant relationships between impulsivity and internet addiction among medical students in northern Iran. Their findings suggest that difficulties with behavioural inhibition may be associated with behaviours that interfere with well-being and daily functioning. The agreement between the studies reinforces the relevance of impulse control to health-related behaviour, although the populations and behavioural outcomes differ.

An important aspect of the present finding is the negative independent contributions of cognitive impulsivity and attention impulsivity. These coefficients indicate that, after the other impulsivity dimensions were considered in the regression model, higher scores on these two dimensions were associated with lower predicted health risk behaviour scores. This result should be interpreted cautiously. It does not establish that cognitive or attentional impulsivity generally protects individuals from health risk behaviour. Rather, it represents the conditional contribution of each dimension within a model in which the predictors are statistically controlled for one another. The observed negative coefficients may also be affected by the strong relationships among the impulsivity dimensions and the outcome measure.

The overall finding supports the Urgency Model of Impulsivity proposed by Cyders and Smith (2008). The model emphasises that impulsive behaviour may occur when individuals respond rashly to intense emotional experiences. The positive contribution of emotional impulsivity in

the present study is consistent with this position. The findings also suggest that motor impulsivity and non-planning tendencies are relevant to understanding health risk behaviour among the practitioners studied. However, the exceptionally high reported explained variance and the strong relationships among the study variables require careful statistical consideration. The regression findings should be interpreted alongside checks of multicollinearity, variable coding, instrument scoring and possible overlap between the impulsivity and health risk behaviour measures. Such checks are important to establish the stability of the regression coefficients and the accuracy of the reported model.

Conclusion

The study investigated impulsivity as a predictor of health risk behaviour among tertiary healthcare practitioners in Benue State, Nigeria. The findings established that impulsivity significantly predicted health risk behaviour. The five dimensions of impulsivity jointly accounted for a reported 99.5% of the variance in health risk behaviour. Motor impulsivity, non-planning impulsivity and emotional impulsivity made significant positive independent contributions, while cognitive impulsivity and attention impulsivity made significant negative independent contributions. The findings indicate that difficulties with behavioural control, future planning and emotion-driven responses may be relevant to the health practices of healthcare practitioners. Although healthcare professionals possess knowledge of disease prevention and healthy living, individual differences in impulse control may be associated with their engagement in behaviours that compromise personal health. The study therefore concludes that impulsivity is a significant predictor of health risk behaviour among the tertiary healthcare practitioners examined. Promoting healthy behavioural practices within healthcare institutions should include attention to impulse control, planning, emotional self-regulation and the development of sustainable health routines.

Recommendations

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

i. Management of tertiary healthcare institutions in Benue State should organise regular psychological wellness programmes that promote impulse control, reflective decision-making and behavioural self-regulation among healthcare practitioners.

ii. Healthcare institutions should introduce health promotion programmes that encourage practitioners to plan and maintain healthy routines, including regular physical activity, balanced dietary practices, adequate sleep and preventive medical examinations.

iii. Further attention should be given to the different dimensions of impulsivity during staff wellness assessments, rather than treating impulsivity as a single and uniform characteristic.

Limitations and Suggestions for Further Studies

The study was restricted to healthcare practitioners in three selected tertiary healthcare institutions in Benue State. Consequently, the findings may not be fully generalisable to practitioners working in primary and secondary healthcare facilities or other states with different occupational conditions. The study also relied on self-reported measures of impulsivity and health risk behaviour. Responses may therefore have been affected by recall difficulties, social desirability and the unwillingness of some participants to disclose sensitive health-related behaviours. Furthermore, the cross-sectional research design limited the ability to establish causal relationships between impulsivity and health risk behaviour. The findings demonstrate

statistical prediction and association rather than definitive cause-and-effect relationships.
Future studies should employ longitudinal research designs to examine how impulsivity relates to changes in health risk behaviour over time. Further research may also examine whether professional designation, age, gender, years of experience, workload and organisational support influence the relationship between impulsivity and health risk behaviour. Researchers should also examine the psychometric properties of the instruments and assess multicollinearity before interpreting regression coefficients, particularly where exceptionally high relationships are observed among the study variables.

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