

2015

Mental Health Professionals' Attitude and Perception of their Role in Tackling Substance Abuse and Related Disorders in Nigeria

Olubusayo Ruth Akinola
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2015

Abstract

Mental Health Professionals' Attitude and Perception of Their Role in Tackling
Substance Abuse and Related Disorders in Nigeria

by

Olubusayo Akinola

MPH, University of East London, Stratford, 2010

BPharm, Obafemi Awolowo University, Ile-Ife, 2005

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Health

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May 2015

Abstract

Mental health professionals (MHPs) play a pivotal role in enhancing treatment outcomes for drug-using populations and minimizing their harm to the public. In response to a gap in the literature, this study sought to (a) assess MHPs' attitudes about the use and abuse of substances and their perception of their role in tackling substance abuse and related disorders in Nigeria, (b) identify predictors of perception, and (c) explore regional variations in attitude. Based on the validated drug and drug users' problems perception questionnaire and the substance abuse attitude survey, a cross-sectional survey was conducted in a randomized sample of 292 MHPs practicing in neuropsychiatric hospitals and in the mental health departments of teaching hospitals from 4 geopolitical zones of Nigeria. A response rate of 81.1% was achieved. MHPs' attitude about substance use tended towards the non-permissive, stereotypical, and moralistic spectrum, and its role perception was distinctly defined. Educational attainment (O.R = 0.50, $p = 0.030$), work-motivation (O.R = 0.55, $p < 0.0001$), and role-support (O.R = 1.48, $p < 0.0001$) significantly predicted MHPs' role perception. The Kruskal-Wallis test showed that there were significant regional variations in the attitudes of multidisciplinary MHPs, $H(3) = 18.727$, $p < 0.0001$. Step-down follow up analysis revealed that the distribution of attitude total score vary significantly between the south-southern and southwestern region ($p < 0.001$), the northeastern and southeastern region of the country ($p < 0.028$). To foster the rehabilitation of this population and its reintegration into mainstream society, a holistic approach toward the standardization of drug treatment is needed. It should take into account the cultural, religious, and ethnic differences predominating in different regions.

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Dedication

This dissertation is dedicated to my soul mate, Oladipo Akinola, whose tenderness, understanding, and unswerving love knew no bounds throughout the period of this study. It is also dedicated to my children, Temiloluwa and Oluwatimilehin. It is my hope that you reach for the stars and never be limited by circumstances around you.

Acknowledgments

This study is dedicated first and foremost to almighty God, ‘my help in ages past and my hope for years to come’ for His divine inspirations and strength.

This dissertation could not have been completed without the guidance and support from my dissertation committee. My sincere gratitude goes to my chair, Dr. Wen-Hung Kuo for his kind encouragement and patient supervision throughout the period of my study. Dr. Wen-Hung Kuo was an excellent mentor whose scholarly input was monumental to the completion of my study. Dr. John Oswald’s unrelenting support and expertise as my committee member imbibed in me the qualities of a good researcher. I also appreciate Dr. Lawrence Fulton, my university reviewer, for ensuring I met the high standards of Walden University.

My sincere gratitude goes to Mrs. Adeline Osakwe, director pharmacovigilance/post-marketing surveillance directorate, National Agency for Food and Drug Administration and Control (NAFDAC); Dr. Femi Ajayi, former director of the National Drug Law Enforcement Agency (NDLEA); Mr. Baba Hussaini, director, drug demand reduction, Dr. Opara, director, training and manpower development (NDLEA); and Mr. Peter Adegbe, for their guidance, support and promptly responding to all my enquiries.

I express my deep appreciation to my dissertation mentor and buddy, Olawunmi Obisesan, Mrs. Helga Nosiri, Dr. Jajere Fatima, Dr. Bukar Bunu, all the MHPs that responded to the survey, my colleagues, family, and friends who contributed tremendously to the success of this study.

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Chapter 1: Introduction to the Study

Introduction

In 2013, according to *The World Drug Report*, the annual prevalence of illicit drug use in Nigeria reflected a persistence increase in substance abuse (United Nations Office of Drug and Crime [UNODC], 2013). An estimated prevalence of over 14% for cannabis use among the population aged 15-64 years placed Nigeria in a compromising situation with the highest prevalence of substance abuse in Africa. This prevalence was much higher than the global average of 5.2-13.5% among the population aged 15-64 years (UNODC, 2012). The levels of other substances misused were also reported high, with an annual prevalence of 1.6% for cocaine, 1.7% for ecstasy, 2% for crack, 1.6% for methamphetamine, and 1% for amphetamine.

Nigeria has been a major point of transit since 2004, for cocaine and heroin intended for North America, Europe, and some part of East Asia (UNODC, 2013). Because of this development, in 2012, the Nigerian National Drug Law Enforcement Agency (NDLEA) seized 233,699.6 kilograms of drugs, of which cannabis accounted for 97.9% of all seizures (228,794.13kg; NDLEA, 2013). However, the high rate of substance abuse in Nigeria could be attributable to the continued availability of locally manufactured illicit substances, which are mainly in their herbal forms (NDLEA, 2013; UNODC, 2013).

The burden of illicit drug use across the globe cannot be overemphasized. In 2010, illicit drug use accounted for between 0.5% and 1.3% of all cause-specific mortality among persons aged 15-64 years. In 2011, illicit drug use accounted for about 0.7% of global all-cause disability adjusted life years (DALY; UNODC, 2012). Illicit

drug use poses a complex and serious problem that contributes to family and social disruption, injury, significant illnesses and diseases, community safety issues, crimes, and violence (Australian Institute of Health and Welfare [AIHW], 2011; HealthyPeople, 2013). At the individual level, people who misuse substances experience multiple social disadvantages and are susceptible to a range of health problems, many of which are linked directly to drug use behaviors (Health Protection Agency [HPA], 2005). These health problems include skin infections, tetanus, wound botulism, abscesses, thrombosis, and septicemia (Hood, Miller, & Christou, 2012; HPA, 2005; Lim et al., 2012).

Substance abuse is a major risk factor for death and negative health outcomes associated with infective endocarditis, hepatitis C, poisoning, and HIV/AIDS (AIHW, 2011; Hood et al., 2012). In 2010, injecting drugs as a major risk factor for HIV and hepatitis C accounted for 502,000 and 2.1 million DALYs respectively (Degenhardt et al., 2013; Lim et al., 2012). In addition, in 2010, suicide because of opioid dependence accounted for 671,000 DALYs (95% CI 329,000-1,730,000), while dependence on amphetamine and cocaine accounted for 854,000 DALYs (291,000-1,791,000), and 324,000 DALYs (109,000-682,000), respectively (Corrigan, Markowitz, Watson, Rowan, & Kubiak, 2003; Degenhardt et al., 2013; Lim et al., 2012). Psychoactive substance use or addictive disorders co-occurring with mental health disorder accounted for 183.9 million DALYs. In addition, in 2010, about 8.6 million years of life lost (YLL) were attributed to premature mortality (Corrigan et al., 2003; Degenhardt et al., 2013).

Between 1990 and 2010, the burden of substance abuse and mental disorders increased by 37.6%, and was the leading cause of years lived with disability (YLDs) worldwide at 22.9% (UI 18.6-27.2; Kessler et al., 2010). The co-occurrence of mental health conditions

and substance use disorders is highly prevalent in the general population due to the association between a primary mental health disorder and a secondary addictive disorder (Kessler et al. 2010). These disorders are associated with high probability of drug dependence treatment. However, fewer than half of COD cases received any form of continuous, integrated treatment (Degenhardt, Whiteford, Hall, & Vos, 2009; Kessler et al. 2010).

The 2010 *World Drug Report* estimated the number of individuals who take illicit substances at between 155 and 250 million, or 3.5% to 5.7% of the global population aged 15 to 64 years (UNODC, 2010). However, just about 4.9 million, or 1.96% of these individuals, have access to drug dependence care and treatment (UNODC, 2009). This fact, which has been confirmed with data presented by the World Health Organization (WHO), illustrates the gaps in drug dependence treatment and care (WHO, 2014). Until recently, substance use disorders (SUD) have not been recognized in many countries as a major health problem, particularly in developing countries, when compared to the attention and recognition given to non-communicable and communicable diseases (WHO, 2014). Furthermore, discrimination and stigma associated with addiction and drug-related problems remain major impediments to appropriate treatment (WHO, 2014).

In 2012, in Nigeria, about 4,000 people with drug dependence at various NDLEA offices were counseled. Some of these individuals were referred to drug addiction treatment centers (National Drug Law Enforcement Agency [NDLEA], 2013). Despite the immense need of people with drug dependence to access healthcare services in Nigeria, individuals who require drug treatment and care do not have access to treatment due to inadequate availability of healthcare resources and inefficient utilization of scarce

health resources (Makanjuola, Daramola, & Obembe, 2007; Obansa, 2013; Osian, 2011; United Nations Population Fund [UNPF], 2010; UNODC, 2013). A further explanation to why people with drug dependence do not seek any form of healthcare treatment and intervention may be due to anticipated stigmatization, lack of confidence in the available treatment services, concealment, and denial of drug use problems (Barney, Griffiths, Jorm, & Christensen, 2006; Grant, 1997; Schomerus & Angermeyer, 2008).

Mental health professionals (MHPs) play a pivotal role in enhancing treatment outcomes and minimizing the adverse consequences of illicit drug use posed by drug using populations to the general public (Kalebka, Bruijns, & van Hoving 2013; Livingston, Milne, Fang, & Amari, 2012; Saxena, Jané- Llopis, & Hosman, 2006). The frequent contact by MHPs offers an increased opportunity for them to engage fully in the healthcare of patients dealing with drug related problems (Grella, Karno, Warda, Moore, & Niv, 2009; Herbeck, Hser, & Teruya, 2008; Livingston et al., 2012). However, caring for these individuals by MHPs has been documented as problematic. MHPs often exhibit attitudes that are deeply held and sometimes attributable to their life history, culture, values, and beliefs (Crisp, Gelder, Nix, Meltzer, & Rowlands, 2000; Gilchrist et al., 2011; Kalebka et al., 2013; Livingston et al., 2012; McFarling et al., 2011; Rao et al., 2009; Room, 2005; van Boekel, Brouwers, van Weeghel, & Garretsen, 2014). It is worth noting that the rehabilitation of individuals who take illicit substances and their reintegration into mainstream society is dependent on the positive and accepting attitudes of MHPs (Bryan, Moran, Farrell, & O'Brien, 2000). Therefore, this study sought to (a) add information on the attitudes and perception of MHPs toward substance abuse and related disorders in Nigeria; (b) explore whether regional variations exist among MHPs

when treating drug-using populations; and (c) examine the predictors of MHPs' perception of their role as measured by the subscale factors of the drug and drug problems perception questionnaire (DDPPQ).

Background

Attitudes toward illicit drug use and substance-related disorders have stirred up complex responses in the society (HealthyPeople, 2013; National Institute of Health & National Institute on Drug Abuse, 2010). In addition to its substantial health implications, illicit drug use has been a focal point of social norms and values where it has been argued that the use of illicit drugs is a matter of personal choice or a disease with biological and genetic foundations (HealthyPeople, 2013). These facts have been related to rejection and low regard exhibited toward individuals who abuse substances and disorders experienced by them (van Boekel, Brouwers, van Weeghel, & Garretsen, 2013). Health care practitioners (HCPs) often hold punitive and stigmatizing attitudes toward individuals with substance-related disorders. In addition, HCPs perceive treating these people as difficult, challenging, and sometimes unachievable (Dean & Soar, 2005; Ford, 2011; Gilchrist et al., 2011; Livingston et al., 2012; McFarling et al., 2011; van Boekel et al., 2013).

Over the years, researchers have investigated physicians' attitudes toward, and their regard for treating, individuals who misuse substances (Gilchrist et al., 2011; Herbeck et al., 2008; Kalebka et al., 2013; Rao et al., 2009; van Boekel et al., 2014). Gilchrist et al. (2011) explored the regard of HCPs for working with individuals who take illicit substances in eight European countries. Results reflected a lower regard for patients who presented with substance related and addictive disorders compared to patients

suffering from any form of chronic disease (Gilchrist et al., 2011). Lower regard in their study was exhibited amongst primary HCPs compared to professionals of specialist addiction services and general psychiatry (Gilchrist et al., 2011).

Kelleher and Cotter (2009) examined the perceived level of competence and knowledge of nurses and doctors in emergency departments. Results from their research revealed an urgent need for enhanced in-service training and need for standardized guidelines in the management of patients who present with substance related addictive disorders in emergency departments (Kelleher & Cotter, 2009). Kalebka et al. (2013) explored emergency departments in South Africa to assess providers' attitudes toward, and their level of exposure to substance related and addictive disorders. The researchers concluded that more training in the field of drug dependence and treatment might be beneficial to HCPs (Kalebka et al., 2013). Various researchers explored the attitudes of physicians and behaviors they exhibit in emergency departments towards individuals that presents with SUDs (Gilchrist et al., 2011; Herbeck et al., 2008; Kalebka et al., 2013; Rao et al., 2009; van Boekel et al., 2014). However, these studies reflect the dearth of knowledge in multidisciplinary MHPs' attitudes, regional variation in attitude, and in perception of their role in tackling substance abuse and related disorders in Nigeria.

Exhibiting negative attitudes to individuals who take illicit substances is undesirable because it may diminish the effectiveness of treatment and can delay recovery and successful integration into the community (van Boekel et al., 2014). MHPs in several countries play a significant role in the detection of substance abuse related disorders and access to treatment because they remain the gatekeepers to any form of specialized treatment (Hasinet, Stinson, Ogburn, & Grant, 2007; Mercy, 2003; Muhrer,

2010). However, different researchers have noted that only a minute proportion of individuals with substance related and addictive disorders seek treatment (De-Graaf, Ten-Have, & Van-Dorsselaer, 2010; Hasin et al., 2007; Substance Abuse and Mental Health Services Administration [SAMHSA], 2011).

Researchers have studied factors that may contribute to the stigmatizing attitudes, beliefs, and low regard exhibited by MHPs and the general public toward patients with substance use disorders (Abed & Neira-Munoz, 1990; Angermeyer, Holzinger, & Matschinger, 2010; Brener, von Hippel, & Kippax, 2007; Crothers & Dorian, 2011; Corrianger et al., 2003; Schomerus et al., 2011b; van Boekel et al., 2013). Evidence from these studies suggest that years of experience (Abed & Neira-Munoz, 1990; Gilchrist et al., 2011), personal habits of HCPs (Crothers & Dorian, 2011), and familiarity with problems associated with the use of substances (Brener et al., 2007; Ding et al., 2005) were found to be associated with more positive attitude toward substance use disorders (SUDs). However, factors shown to influence attitudes negatively included providers' attribution of substance use disorders to personal weakness (Schomerus et al., 2011a; van Boekel et al., 2013). Other researchers indicated that emotional reactions, anger, and feelings of fear and pity played a major role in attitudes (Angermeyer et al., 2010; Corrigan, 2000). These studies explored determinants of attitudes exhibited by nurses (Crothers & Dorian, 2011), general practitioners (Abed & Neira-Munoz, 1990; Brener et al., 2007), and the public (Angermeyer & Marschinger, 2003). However, none of these researchers explored regional variation as a likely predictor of the attitudes of multidisciplinary MHPs toward dealing with drug-using populations, and none of these studies were conducted in Nigeria.

Researchers have also explored attitudes of nurses toward individuals who take illicit substances generally (Chu & Galang, 2013; Dorrian & Crothers, 2011; Ford, 2011; Raeside, 2003; Sleeper & Bochain, 2013). Results from these studies suggest a potential need for trainings on illicit drug treatments and organizational interventions to increase the role support of nurses (Chu & Galang, 2013; Dorrian & Crothers, 2011; Ford, 2011; Raeside, 2003; Selleck & Redding, 1998; Sleeper & Bochain, 2013). Although the attitudes of MHPs received considerable attention, most of these studies explored the attitude of MHPs toward patients with comorbidity or COD (Bullock, 2002; Dean & Soar, 2005; Richmond & Foster, 2003; Stuber, Rocha, Christain, & Link, 2014). These researchers reiterated the need for a more optimistic attitude when providing interventions for individuals who take illicit substances.

MHPs' perceptions of substance misuse and related addictive disorders have been less extensively studied than attitudes toward substance use generally. Several studies conducted on perception of substance abuse focused mainly on public perception, teenagers, colleges, and university students (Benjaranó et al., 2011; Cirakoglu & Isin, 2005; Lewis & Mobley, 2010; Oshikoya & Alli, 2006; Rassool, 2006). Although Dolan and Kirwarn (2001) surveyed the perception of substance misuse by staff members who deal with co-morbid clients, perception of these HCPs was explored in the context of in-patient's misuse of substances whilst in a psychiatric hospital. The researchers established the use of illicit substances by in-patients in major psychiatric wards. These researchers also reiterated the need for adequate training, and the dissemination of clearer policies to ensure the security of staff dealing with individuals who abuse substances whilst in treatment (Dolan & Kirwan, 2011).

It is worth noting that no published article focused on regional variation in attitudes of multidisciplinary MHPs and perception of their role as it relates to substance abuse and addictive disorders. Neither has any research been conducted in Nigeria to analyze the attitudes and perception of these professionals toward tackling substance use disorders. Because of the cultural, religious, and multiethnic characteristics of Nigeria, the availability of healthcare services, access to, and use of them is influenced by regional variations that greatly affect the quality of health service delivery (Baba & Omotara, 2012).

Multidisciplinary MHPs are likely to be more exposed to uninformed and biased attitudes and perceptions toward substance abuse and drug using populations generally. The assumption is that their level of training and expertise in the field would address these biases (Au, 2006). This might not always be the case, as MHPs may be oblivious of the attitudes they might have absorbed from cultural norms, social norms, and acceptable behavior generally (Au, 2006; Livingston et al., 2012). MHPs' unclear perception of their role in dealing with individuals who misuse substances may significantly alter drug management decisions and treatment outcomes (Livingston, Milne, Fang, & Amari, 2012).

The present study was deemed necessary due to the magnitude of illicit drug use in Nigeria, and to address a gap in the literature. The perceptions and attitudes of multidisciplinary MHPs who treat people with substance abuse and related disorders were therefore explored to achieve evidence-based drug dependent treatment strategies in Nigeria.

Problem Statement

Given the persistence availability of illicit substances in Nigeria, the high prevalence of substance abuse that is much higher than average compared to other African countries (5.2- 13.5% of the population aged 15- 64 years), and the regional variation in the prevalence of substance abuse within the six geopolitical zones of the country, it was important to explore the attitudes and perceptions of multidisciplinary MHPs whose mandate is to rehabilitate individuals who abuse substances and help reintegrate them into the society. Therefore, this study sought to assess MHPs' attitudes about the use and abuse substances, and their perceptions of their role in tackling substance abuse and related disorders in Nigeria. It further sought to establish predictors of multidisciplinary MHPs' perception and to explore if there were significant regional variations in attitude amongst MHPs in dealing with drug-using populations.

Purpose of the Study

This non-experimental, quantitative study was aimed at assessing the attitudes and perceptions of multidisciplinary MHPs toward substance abuse and related disorders. This study also sought to establish if a correlation occurred in perceptions and socio-demographic variables (gender, age, educational attainment, profession, role support, and work motivation) amongst them. It further sought to establish whether there was regional variation amongst MHPs' attitudes.

To achieve the aims and objectives of this study, two validated questionnaires were adopted: the substance abuse attitude survey (SAAS), and the drug and drug users' problems perception questionnaires (DDPPQ). Attitudes of multidisciplinary MHPs were assessed using the SAAS five subscale factors of permissiveness, non-stereotypes, non-

moralism, treatment intervention, and treatment optimism. The five subscale factors of perception were assessed using the DDPPQ.

Research Questions and Hypothesis

To establish MHPs' attitude and perception of their role in tackling substance abuse and related disorders, I explored the following research questions and hypothesis.

1. What types of attitude do MHPs hold regarding the use and abuse of substances in Nigeria?

H01: MHPs hold positive and constructive attitude toward substance abuse and addiction in Nigeria.

HA1: MHPs hold negative and suboptimal attitude toward substance abuse and addiction in Nigeria.

2. What are MHPs' perception of their role in tackling substance abuse and related disorders in Nigeria?

H02: MHPs exhibit lack of distinctly defined perception of their role in tackling substance abuse and related disorders.

HA2: MHPs exhibit distinctly defined perception of their role in tackling substance abuse and related disorders.

3. Can gender, age, educational attainment, profession, region, role support, and work motivation predict the perception of MHPs' role toward drug using clients?

H03: Gender, age, educational attainment, profession, region, role support, and work motivation cannot be used to predict the perception of MHPs' role toward drug using clients.

*HA*₃: Gender, age, educational attainment, profession, region, role support and work motivation can be used to predict the perception of MHPs' role toward drug using clients.

4. Is there a significant regional variation in attitude amongst multidisciplinary MHPs when dealing with drug-using populations in Nigeria?

*H*₀₄: There is no significant regional variation in attitude amongst multidisciplinary MHPs when dealing with drug-using populations in Nigeria.

*HA*₄: There is a significant regional variation in attitude among multidisciplinary MHPs when dealing with drug-using populations in Nigeria.

Descriptive statistics with graphical and numerical techniques for summarizing data were used to analyze the distribution frequency of data on numerical and categorical variables (Frankfort-Nachmias & Nachmias, 2008). Chi-square tests were performed between the dependent variable, perception in two categories (positive vs. negative perception) and the independent variables (socio-demographic variables). To test the strength of association and to establish whether attitude and perception (dependent variables) significantly differed from the group means, a one-way Analysis of Variance or Kruskal-Wallis test (where assumptions of ANOVA was violated) was conducted. This test was used to assess whether MHPs' means score in attitude, measured at different subscale factors of the SAAS and perception, measured by the subscale factors of the DDPPQ toward substance abuse and related disorders was different across the possible values of discrete variables with more than two categories. Multiple logistic regressions were conducted to identify the main predictors of perception in two categories.

Theoretical Framework

The theory of planned behavior (TPB) was the theoretical framework for this study because it is an attitude specific framework (Ajzen, 1991). TPB concept was proposed by Ajzen to refine and boost the theory of reasoned action's (TRA) predictive power by incorporating planned behavioral control (PBC) to the existing theory (Ajzen, 1991; Kelly, Deane, & Lovett, 2012). The concept of the PBC that was introduced originated from the theory of self-efficacy proposed by Bandura in 1977. Bandura defined self-efficacy as individual's conviction that behavior can be successfully executed in such a way as to produce a required outcome and separated expectations such as behavioral reactions, performance, feelings of frustration, and motivation into two distinct types: outcome expectancy and self-efficacy (Bandura, 1977).

TPB posits that subjective norm, attitude, and perceived behavioral control together shape an individual's intention to behave in a certain way (Ajzen, 1991; Kelly et al., 2012). This theory establishes the link between behavior and beliefs. In addition, TPB has been applied to studies that explore relationships in beliefs, behaviors, attitudes, and behavioral intentions (Ajzen, 1991; Kelly et al., 2012). Ajzen defined an individual's attitude as the negative or positive feelings experienced in executing a behavior, which can be accessed through his or her perspective toward the outcome of that behavior (Ajzen, 1991). Attitude can further be determined through an evaluation of an individual's belief with respect to the consequences that could arise from behaving in a particular manner and an assessment of the desirability of such consequences (Fishbein & Ajzen, 1975; Sheppard, Hartwick, & Warshaw, 1988; Sniehotta, 2009).

In Ajzen's theory, perceived behavioral control (PBC) refers to an individual's perception of his or her potential to execute a particular behavior and it is assumed that PBC can be determined by the set of factors that may impede or facilitate the performance of a given behavior (Ajzen, 1991). To the extent that PBC is an accurate reflection of an actual behavior, the perception of behavioral control together with intention can therefore, be used to predict a given behavior (Ajzen, 1991). However, it is generally believed that the greater the perceived control and the more favorable the subjective norm and attitudes toward behavior, the stronger the individual's intention to execute fully the particular behavior in question (Ajzen, 1991; Sheppard et al., 1988).

The discipline of health psychology has immensely benefitted from the application of theories that could be linked to the psychology of health-related behaviors. Previous investigations revealed the application of TPB to health-related fields such as physical activity, exercise, and mental health (Sheppard et al., 1988; Sniehotta, 2009). Adapting the theory of TPB to this current study provided an in-depth understanding of MHPs' attitude toward substance abuse and related disorders, which further elucidates their level of involvement and perception of their role toward engaging in the healthcare of drug-using populations in Nigeria (Sheppard et al., 1988; Sniehotta, 2009). Establishing a causal relationship between attitude and demographic variable further elucidated MHPs' perception of the difficulty or ease of carrying out the behavior of interest. The theory (TPB) further provided in-depth understanding of the factors that could influence behavior and was used to determine if attitude could be linked to perceived behavioral control, social and subjective norms displayed by MHPs when dealing with drug using populations in Nigeria.

Nature of the Study

I conducted a quantitative cross-sectional survey and data represented a snapshot in time (Creswell, 2009). Surveys are used to obtain facts and information from sample of individuals about their habits, behavior, attitudes, knowledge, history, or beliefs (Creswell, 2009; Sim & Wright, 2002). Information obtained from this type of study can be used to describe and estimate variables such as the attitudes, functional status, and the characteristics of the population being surveyed (Creswell, 2009; Sim & Wright, 2002). Collection of information for this study was conducted without any form of manipulation or change in participants' natural environments. Therefore, this study represented a purely descriptive study design, which is explained in the following two paragraphs.

Descriptive research tends to present facts on the status and nature of a situation as it exists at the time of study (Chapel, Veach, & Krug, 1985; Creswell, 2009; Sim & Wright, 2002). Descriptive research is also concerned with practices and relationships that exist, beliefs, and processes that are ongoing, or trends that are developing (Sim & Wright, 2002). In addition, the approach tries to describe systems, present events, or conditions based on the reaction or impressions of the respondents (Creswell, 2009; Sim & Wright, 2002). Descriptive studies also allow reformulation of the study objectives into research questions and hypotheses, which can then be answered using data collected from the study (Frankfort-Nachmias & Nachmias, 2008).

An important characteristic of a descriptive research study is that data are collected in their natural state; there is no manipulation of variables of interests. Thus, no intervention or interference exists (Chapel et al., 1985; Sim & Wright, 2002). The survey approach was the best mode of data collection for this study, which was a study that

sought to gather information on the attitudes and perception of multidisciplinary MHPs toward drug using populations.

For the purpose of this study, I adapted the following two instruments: the substance abuse attitude Survey (SAAS), and the drug, and drug users' problems perception questionnaire (DDPPQ) with lists of validated questions on attitude and perception (Chapel et al., 1985). The internal consistency and extent of reproducibility of these two instruments have been established (Creswell, 2009). SAAS measures attitudes based on degree of permissiveness (i.e., an accepting attitude toward allowing the existence of a particular behavior); treatment intervention (i.e., inclination of the use of substances in the context of intervention and treatment); non-stereotypes (i.e., non-reliance on societal norms over-simplified attitude toward the use and abuse of substances); treatment optimism (i.e., assumption that the care and treatment of drug dependence will be successful); and non-moralism (i.e., avoidance of any form of moralistic attitude toward the use of substances (Chapel et al., 1985). The subscales of the DDPPQ measure perception based on role legitimacy, role adequacy, work satisfaction, role support, motivation, and task-specific self-esteem (Watson, Maclaren, Shaw, & Nolan, 2003). The two surveys consist of 53 attitudinal and perception statements. The level of agreement or disagreement between these statements was indicated on a four-point Likert scale (Chapel et al., 1985; Watson, Maclaren, Shaw, & Nolan, 2003).

Study Variables

The independent variables in this study were the socio-demographic characteristics of the study participants such as gender, age, educational attainment,

profession, region, work motivation, and role support of MHPs. The dependent variables were attitudes and perception. The dependent variables, attitude and perception, were measured using a five-subscale factor in the SAAS questionnaire and a six-subscale measure in the DDPPQ respectively. To maximize quality of data and to minimize the nonresponse rate, a face-to-face survey was conducted.

Operational Definitions

Attitude: A relatively enduring framework of behavioral tendencies, feelings and beliefs toward socially significant events, symptoms, objects or groups (Hoggs & Vaughan, 2005).

Co-occurring disorder: A behavioral health disorder by an individual characterized by co-existing substance use disorders and mental illness (SAMHSA, 2002).

Comorbidity: A general term referring to co-occurrence or dual diagnoses of a psychiatric disorder and a psychoactive substance use disorder (WHO, 1994).

Detoxification: A process of withdrawal by an individual from the harmful effects of psychoactive substances (WHO, 1994).

Disability: Individuals with cognitive, sensory, developmental, emotional, or physical impairment consequences are said to have a disability (Silver, Wasserman, & Mahowald, 1998).

Drug: Any chemical substance, synthetic or natural that alters the mental state of an individual. A drug may be used repeatedly to achieve the same result (Commonwealth Department of Human Services and Health [CDHSH], 1994). The term includes illegal

and legal substances such as cannabis (marijuana), caffeine, kava, alcohol, anabolic steroids, psychoactive inhalants, and pharmaceuticals (CDHSH, 1994).

Drug misuse: Drug misuse is the inappropriate or harmful use of drugs (WHO, 1994).

Harm minimization/harm reduction: Strategies to minimize the social problems and harms to the community and individuals resulting from drug use (NSW, Health Department, 1999).

MHPs: Healthcare practitioners who offer health services and treatment solely for the purpose of treating mental illness or improving the mental health of individuals who require such services (American Psychiatric Association, 2000; Arthur, Felgoise, & Davis, 2008). The categories include clinical psychologists, psychiatric nurses, mental health counselors, psychiatrists, and clinical social workers (APA, 2000).

Moralism: The tendency to make judgment about a particular principle of conduct or system of values that defines the extent to which an action is deemed wrong or right (Stanford University, 2011).

Motivation: The cognitive, emotional, social, and biological forces that activate goal-oriented behaviors (Cherry, 2014).

Permissiveness: Characteristically or habitually accepting a particular behavior that others might forbid or disapprove (National Deviancy Conference [NDC], 1980; Newburn, 1992).

Psychoactive substances: Chemical substances that act mainly on the central nervous system after crossing the blood-brain barrier, which result in alteration of

cognition, mood, behavior, consciousness, and perception (Northern Territory Government of Australia [NTGA], 2014).

Role adequacy: Role adequacy is a notion of being well informed and enlightened about one's work (Loughran, Hohman, & Finnegan, 2010).

Role legitimacy: Individual's confidence of the prerogative right to address certain client issues (Loughran et al., 2010).

Role support: To offer help, encourage or advice regarding a service or product; to maintain in action, existence, or condition (Oxford Dictionaries, 2014).

Stereotype: Over generalized or fixed belief about a class of people or a particular group (Cardwell, 1996).

Substance dependence: A cluster of behavioral, physiological, and cognitive symptoms that indicates an impaired control of the use of illicit substances despite its adverse consequences (APA, 2000)

Substance use disorder: Habitual use of substances that degenerates to maladaptive and symptomatic changes in behavior that would otherwise be viewed as undesirable and improper comparatively in all cultures (APA, 2000).

The Diagnostic and Statistical Manual of Mental Disorders (DSM): Authorized classification of mental health disorders endorsed and used by MHPs in the United States (APA, 2000). The fifth edition, DSM-5, was used in this study.

Treatment optimism: Positivity on the successful outcome of drug dependence care and treatment (Hart, 2009).

Treatment intervention: Treatment intervention is the consistent and precise conceptualization of the extent to which health services is received, delivered, and used as intended (Hart, 2009).

Withdrawal syndrome: A group of symptoms experienced upon the decrease in intake or abrupt disruption of recreational drugs (Alexander, Sayla, Holmes, & Sachs, 2006).

Work satisfaction: Positive or pleasurable state of mind resulting from the evaluation of one's job or job experiences (Locke, 1976).

Assumptions

The following assumptions were made in this study:

- I assumed that there are discernible patterns of behavior, opinions, and beliefs in the society and that the study respondents share in these broad patterns with a common discourse.
- I assumed that the answers provided in the survey were the honest and direct reflection of what the study participants felt or thought, and conveyed an accurate description of these feelings and thoughts.
- I assumed that MHPs recruited in this study had full understanding and awareness of the concept of substance abuse and related addictive disorders.
- I assumed that the information obtained was gathered in a non-contextual manner.

In other words, I assumed that the social and physical environment for data collection and the relationship between the respondents and myself were both potentially eliminable from the nature of the collected data.

Scope and Delimitations

I delimited the methodology and choice of variables (both independent and dependent) examined in this study. The decision to explore attitudes and perception using the TPB, the decision to use a self-administered questionnaire, and the decision to survey MHPs licensed to practice in Nigeria were important delimitations of this study. Because only MHPs licensed to practice in Nigeria were surveyed, other HCPs, such as medical assistance and primary healthcare physicians who might have encountered patients with substance related and addictive disorders were excluded from the study. In addition, complex issues and opinions that could have influenced the attitudes and perception of MHPs could not be explored in great depth due to the research tool (questionnaire) that was used for data collection.

Limitations

This study, just as every other survey-based study, was not without limitations as it relied on self-report when collecting data from the participants. The responses may not be an accurate reflection of the participants' attitude and role perception with respect to substance abuse and related disorders, particularly when the NDLEA and the association of psychiatrists in Nigeria endorsed their roles to minimize harm, to promote, and to support the health of individuals who take illicit substances. The participants might have indicated a generally acceptable norm of the society, which might have led to imprecision in data collected. Moreover, results from non-participants might have caused a substantially different outcome.

Significance

Although much is known about HCPs and substance abuse (Gilchrist et al., 2011; Herbeck et al., 2008; Kalebka et al., 2013; Rao et al., 2009; van Boekel et al., 2014), research into factors that affect MHPs' engagement and attitudes toward the healthcare of drug-using populations in Nigeria have not been fully explored. Despite the persistence increase in the prevalence of substance abuse, to date, no empirical studies have examined regional variation in attitudes of MHPs toward tackling substance abuse related disorders. Neither has the difference in attitude and the perception of multidisciplinary MHPs who work with drug using populations in Nigeria been fully explored.

Implications for Social Change

If opportunities to promote the health of individuals with substance related and addictive disorders, to minimize harm, with possible reduction in criminal activities, and loss of productivity due to disability are to be reinforced, it is important to know the attitudes, perception, predictors of perception, and current level of involvement of MHPs toward substance abuse and related disorders in Nigeria. The attitudes and perceptions of multidisciplinary MHPs toward substance abuse and related addictive disorders must be well understood. Therefore, to provide evidence-based drug dependent treatment in Nigeria, it is expected that this study will encourage positive professional discretion, and increased medical judgment in designing empirically validated drug dependent treatment plans and care, which are based on the needs of individuals who misuse substances. Because MHPs act as gatekeepers to substance abuse treatment and play a pivotal role in diagnoses and identification of substance-use related problems (van Boekel et al., 2013), it is expected that additional research on tackling substance abuse with a primary focus

on regional variation in attitude of multidisciplinary MHPs, would contribute to eliminating treatment barriers. In addition, this research could help facilitate the rehabilitation and reintegration of drug using populations while enhancing effective collaboration between patients and professionals. It is expected that this study will improve accountability and oversight while promoting the state-of-art treatment services in Nigeria.

Summary

In this chapter, I described the dearth of knowledge and gap in the literature regarding multidisciplinary MHPs' attitude and perception of their role towards substance abuse and related disorders in Nigeria. Furthermore, the theoretical proposition (TPB) as it relates to the research questions and the study approach was explained unambiguously. A concise rationale for conducting a non-experimental quantitative research was provided. In addition, the potential contribution of this research to improving the attitudes of multidisciplinary MHPs, and the perception of their role towards dealing with drug using populations, the significance, and positive social implications of this study were reiterated and ascertained.

Chapter 2 offers an exhaustive review of the literature on (a) substance abuse and addictive disorders, (b) permissive, stereotypical, and moralistic attitudes; (c) predictors of attitude; attitude toward co-occurring disorders, (d) prejudice against individuals with substance abuse related disorders, (e) impact of trainings on attitude; and (f) substance abuse related studies in Nigeria. The gap in the literature is shown, and studies that described both the dependent variables (perception and attitude) and the independent variables (socio-demographic characteristics of the study population) were reviewed and

synthesized. Chapter 3 covers issues regarding the methodology. It includes the sampling and sampling procedures, the target population, the procedures for recruitment and data collection, and the ethical procedures, which includes protecting confidential data.

Chapter 2: Literature Review

Introduction

The purpose of this study was to assess multidisciplinary MHPs' attitudes about the use and abuse of substances and to assess how they perceived their role in tackling substance abuse and related disorders in Nigeria. The study also sought to identify predictors of perception and to explore possible regional variations in attitude toward the five subscale factors of SAAS: permissiveness, treatment intervention, non-stereotypes, treatment optimism, and non-moralism. The review covered the following topics:

- The theoretical proposition of TPB that describes the elements of attitudes and perceptions
- A comprehensive literature based analysis of the application of the TPB and its relevance to the current study.
- A general overview of attitude structure, the cognitive, affective, and behavioral basis of attitude for predicting behavioral intention and perception
- Evidence on the factor analysis of the subscales of substance abuse attitude surveys followed by previous research on healthcare professionals' perception of role legitimacy and role adequacy and its impact on role support and motivation
- Predictors of MHPs' attitudes and perceptions in previous studies to provide an in-depth description and understanding of what is known
- Substance abuse related studies in Nigeria
- Impact of trainings on MHPs' attitude

- The continued debate surrounding perception of role and attitudes toward substance abuse and related disorders are reviewed.

Literature Search Strategy

To identify the relevant literature, the following databases were used: PsycINFO, PsycARTICLES, ScienceDirect, PubMed, Cochrane Database of Systematic Reviews, Citation Index Expanded, Database of Abstracts of Reviews of Effects (DARE), ProQuest Dissertations and Theses, Google Scholar, and INFOMINE. The reference lists from the articles also served as potential sources. The National Institute on Drug Abuse database and the Collaborating Center for Mental Health database were also explored.

The keywords used in searching for items on attitude and perception were as follows: *mental attitude, orientation, stigma, positioning, mentality, regard, acceptance, expectation, motivation, role support, perception, role perception, role legitimacy, stereotypical attitude, task specific self esteem, moralistic attitude, stereotype and perspective-taking*. The keywords used in searching for items on substance-related addictive disorders were *co-occurring disorders, dual-diagnosis, personality disorders, substance dependence, comorbidity, mood and psychotic disorders*. The keywords used in searching for items on substance abuse were *substance misuse, illicit drug use, substance use, psychoactive substance use, and abuse*.

The search was limited to original articles from current peer-reviewed journals, seminal, gray literature, and dissertations. The searches identified all studies with at least one of the following Boolean phrase: *attitudes of Mental Health Professionals, perception of Mental Health Professionals, attitude toward substance abuse, attitudes toward substance abuse related disorders, perception of substance abuse, TPB [and]*

substance abuse treatment providers, substance abuse related studies in Nigeria, perception of substance abuse related disorders, cognitive basis of attitude, TPB predicts substance use, and affective basis of attitude.

Theoretical Foundation

Historically, the concept of attitude has been defined broadly as the conation, belief, and construct-combining effect intervening between responses and a stimulus. McDougall incorporated this concept into psychology in his sentiment's notion (Pratkanis, Breckler, & Greenwald, 1989). Many previous reviewers admitted the difficulty in demonstrating the importance of attitude in its entirety because answering this question is dependent on an individual's understanding of the relationship between behavior and attitudes (Defleur & Wesle, 1963; Greenwald & Sakumura, 1967). In noting several definitions of attitude, the most attractive definition based on its ancient philosophical roots is the definition provided by Rosenberg and Hovland (1960). These researchers defined attitude as the predisposition to certain classes of responses based on some stimuli. Rosenberg and Hovland further designated the three major types of responses; behavioral, affective, and cognitive that has achieved widespread adoption (Pratkanis et al., 1989; Rosenberg, & Hovland, 1960).

Theory of Planned Behavior (TPB)

Going forward, the most suited theoretical foundation of attitude and perception for this present study is the TPB. Ajzen coined TPB from the theory of reasoned action in 1980, which was developed by him and Fishbein after trying to appraise the discrepancies between behavior and attitude (Ajzen, 1991). According to the TPB, achieving a particular behavior is dependent on both behavioral control (ability) and intention

(motivation). Ajzen (1991) posited that human behaviors are guided by some basic set of assumptions on varying degrees of beliefs and these include:

- Beliefs about the existence of impeding or facilitating factors that may affect the performance of a given behavior and the perceived influence of these factors (control beliefs)
- Normative beliefs about other peoples' expectations and the required motivation to adhere to these expectations (normative beliefs)
- Beliefs about the seeming consequences of a behavior and the appraisal of such consequences (behavioral beliefs)

In their respective aggregate, control beliefs and normative beliefs give rise to PBC and subjective norms respectively while behavioral beliefs result in unfavorable or favorable attitude toward behavior (Ajzen, 1991). In combination, perception of behavioral control, subjective norms, and attitude toward a given behavior leads to the formation of an intention toward behaving in a particular way (Ajzen, 1991; Gollwitzer, 1999). The TPB has been employed to predict the uptake of current technologies and new information by HCPs in behavioral and medical health generally (Meyer, 2002; Walker, Grimshaw, & Armstrong, 2001). In addition to predicting a particular behavior, TPB provides a gateway to positive behavioral modification (Meyer, 2002), see Figure 1.

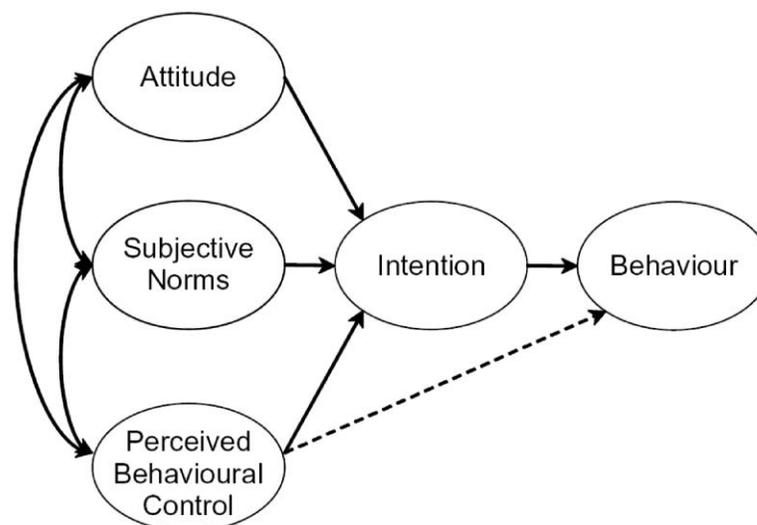


Figure 1. Theory of planned behavior (Source: Ajzen, 1991, Copyright 2015 by Elsevier. Adapted with permission of the author)

Casper (2007) evaluated the impact of continuing educational class that incorporated TPB on behavior and behavioral intentions of MHPs. In his study, 94 MHPs recruited from the psychiatric department of Behavioral Healthcare Education were assigned randomly to either a class that applied TPB or to one that used standard continuing education (Casper, 2007). An elicitation exercise was further conducted to access information on planned behavioral control (PBC), social norms and attitudes of the study participants and the obtained information formed the basis of the communication strategies employed by the instructors (Casper, 2007).

Study participants in Casper's study, responded to a 7-point agreement scale questionnaire and 12 multiple-choice questions about knowledge in a test questionnaire. Findings from the study revealed significant post class intentions using the theory-guided format ($M \pm SD = 58.5 \pm 2.7$, $F = 73.1$, $p < .001$; Casper, 2007). Casper established the importance of TPB in improving behavioral intentions of MHPs toward their clients and

its general suitability in psychiatry. Assessing the PBC, norms, and attitude of MHPs can therefore shed light on strategies that can be used to create effective communication that could modify behavior and intention (Casper, 2007).

An important proxy for the behaviors of healthcare workers has been ‘intentions’ due to its explorative way of accessing behavior before any form of level trials in formal service can be undertaken (Perkins et al., 2007). Research conducted by Kelly et al. (2012) examined the intentions of substance abuse workers and incorporated the TPB to establish intention to adopt evidence-based practice. Study participants were residential substance abuse workers across the New South Wales and the Australian Capital Territory (Kelly et al., 2012). Components of the theory completed by the respondents were used to assess PBC, attitudes, intentions, and subjective norms (Kelly et al., 2012).

Their level of agreement to the TPB questions that was developed based on Ajzen’s specification was measured on a 7-point bipolar, adjective-response scale (Ajzen, 2006; Kelly et al., 2012). The researchers used a linear mixed model procedure to establish correlations between the components of the TPB and demographic variables. Findings from the researchers established significant correlations between intentions and PBC ($r = .52$), subjective norms ($r = .60$) and attitudes ($r = .36$). Forty one percent of the variance in substance abuse workers’ intention was explained by PBC, subjective norm, and attitudes, $F(3, 103) = 24.87, p < .00$ (Kelly et al., 2012). The component of TPB was used successfully to predict intentions of clinicians to use evidence-based practice and the identified predictors of behavioral intentions were PBC, subjective norms, and attitudes (Kelly et al., 2012). The researchers established the importance of social reinforcement in

implementation approaches targeted at incorporating evidence based practices into routine drug dependence treatment and care (Kelly et al., 2012).

Further, Zemore and Ajzen (2013) assessed the relevance of this theory in predicting completion of substance dependence treatment. The study provided an in-depth understanding of the key variables that influence treatment participation and embarked on this study to establish the applicability of the TPB a social-cognitive model in treatment completion (Zemore & Ajzen, 2013). Study participants were recruited from educational groups and baseline data collection were obtained from two sites administering substance abuse programs (Zemore & Ajzen, 2013). Direct measures of TPB were developed based on the recommendations of Ajzen for component-measurement of TPB.

PBC, subjective norm, and attitude were assessed based on treatment completion using two items, and a 3-item of inquiry was employed to assess individual's intention to complete substance abuse treatment and care (Zemore & Ajzen, 2013). The treatment motivation questionnaire developed by Ryan, Plant, and O'Malley (1995) was adapted in the study as additional measures of readiness to complete treatment (Zemore & Ajzen, 2013). Social desirability was measured using the Marlowe- Crowne social desirability short form scale developed by Ballard (Ballard, 1992; Crowne & Marlowe, 1960) while perceived coercion was measured by both the employment and legal factorial subscale of the perceived coercion questionnaire (Klag, Creed, & O'Callaghan, 2006).

The control and attitude components of the TPB predicted behavioral intention independently (model $R^2 = .56$) and behavioral intention was associated positively with completion of substance abuse treatment including demographic and clinical covariates

(model $R^2 = 0.24$; Zemore & Ajzen, 2013). TPB in their study further predicted treatment completion and intention of the study participants based on standardized estimates after controlling for socio-demographic variables such as race/ethnicity, parenting status, baseline psychiatric severity, education and drug severity, $\chi^2 (df = 7, N = 198) = 3.50, p < .001, RMSEA = .00, CFI = 1.00$ (Zemore & Ajzen, 2013).

Results obtained by the researchers demonstrated the importance of perceived control and attitude regarding treatment assessment to enable suitable identification of targets for intervention. Zemore and Ajzen (2013) clearly illustrated the probability of engaging in a particular behavior by intention, which is a function of planned behavioral control, subjective norm, and attitude regarding the behavior (Zemore & Ajzen, 2013). Adopting the TPB to assess MHPs' attitudes, PBC, and norms could therefore reveal cogent information required to create effective communication and educational strategies that may improve these elements (Ajzen, 1991; Casper, 2007).

Although the TPB is typically used in the prediction of individuals' likelihood to take up healthy behavior, research also indicates its applicability to attitude and behavior portrayed by medical practitioners to their patients generally (Perkins et al., 2007; Roberto, Goodall, West, & Mahan, 2010). The effectiveness of theories of planned behavior and reasoned action in predicting communication with clients by substance abuse treatment providers was examined by Roberto, Shafer, and Marmo (2014). The aim of their study was to establish intentions, subjective norms, behavior, PBC, and attitude of substance abuse treatment providers toward recommending medication-assisted treatment (Robert et al., 2014). The 210 substance abuse treatment providers who responded to the survey were recruited from the Addiction Technology Transfer Center.

The procedures outlined by Ajzen and Fishbein (1980) were employed for the development of the TPB and the theory of reasoned action measure in the study, followed by items developed by Madden, Ellen and Ajzen in 1992 (Roberto et al., 2014). The hypothesized relationship between the TPB and the theory of reasoned action variables were then tested via the structural equation modeling. Results obtained from the study indicated neutral subjective norms and positive attitudes by substance abuse treatment providers (Roberto et al., 2014). A substantial path coefficient between behavioral intention and attitude ($\beta = .55$, $P (.45 \leq \beta \leq .65) = .95$ and significant coefficients were obtained, $r = .40$, $P (.30 \leq R \leq .50) = 0.95$. The researchers established the importance of incorporating effective health communication to interventions focused on substance abuse treatment providers if interventions are conducted based on the constructs of TPB (Roberto et al., 2014). TPB in addition to predicting a behavior provides standard model for modifying behavior where the combination of decisional autonomy, social approbation, positive attitude, and self-efficacy may increase the likelihood of performing a particular behavior and strengthen the individual's intention (Casper, 2007).

Attitude Structure

The relationships between the structural components of attitudes have attracted attention by researchers who mainly focused on the affective and cognitive bases of attitudes amongst models so far developed (Eagly & Chaiken, 1993). Past research explored issues related to the constructs of attitudes such as the interaction of the components of attitudes and persuasive appeals that could result in attitude change (Millar & Millar, 1990). Researchers have also focused on how the affective and

cognitive components of attitude might be weighted differentially toward attitude objects (Crites, Fabriger, & Petty, 1994).

Cognitive, Affective, and Behavioral Bases of Attitude

Historically, several attitude theorists have established distinctions between cognitive and affective components of attitudes (Rosenberg & Hoyland, 1960; Traindis, 1971). This was corroborated by multiple factor analysis techniques developed by Kernan and Trebbi (1973). The affective component of attitude consists of beliefs held by an individual concerning a particular issue, and it is characterized by feelings of guilt and anxiety towards individuals who are mentally or physically challenged (Bullock, 2002; Livneth, 1982). The cognitive domain is characterized by an interruption of social rules that often leads to worries, withdrawal, or avoidance between the disabled and non-disabled individuals (Bullock, 2002; Livneth, 1982). In situations where individual's attitude to an issue reflects in its behavior or action, the cognitive structure relevant for blocking or attainment of the action, is considered as the belief of that individual weighted by the placed value on the said goals (Norman, 1975).

Stark, Borgida, Kim, and Pickens (2008) examined the cognitive and affective components of attitude, experience, affective-cognitive consistency, and knowledge in terms of predicting an individual's overall attitude. In addition, the researchers explored prior empirical findings using a random probability sample to understand issues of harm minimization/reduction as they relate to the use of tobacco (Stark et al., 2008). Overall, attitudes of study participants were assessed using the semantic-differential measures made on a 7-point Likert rating. The knowledge scale was adopted to measure the level of knowledge of study participants and knowledge about reduced exposure to tobacco.

To address feelings and cognitions about harm reduction, the researchers further refined both the affective and cognitive scales (Stark et al., 2008). Results obtained from their study reflected causal relationship between affective score and attitudes toward harm reduction [$b = .50, p < .002, t(230) = 3.10$], which reflected more positive attitudes from both non-smokers and individuals who smoke tobacco. Attitudes toward smoking generally were predicted by affective-cognitive consistency, [$b = .41, p < .006, t(233) = 2.78$] and knowledge, [$b = -0.03, p < 0.012, t(233) = -2.54$] (Stark et al., 2008). The researchers established affective and cognitive based persuasion techniques to changing attitudes. They further reiterated the potential of attitude structure in psychology to illuminate the intra-attitudinal dynamics of individuals toward adopting a particular behavior (Stark et al., 2008).

To establish a causal relationship between attitude-behavior and attitude-intention on structural consistency, Zhou, Wang, Dovidio, and Yu (2009) conducted a mixed mode experimental design. The researchers hypothesized a high affective-cognitive consistency condition if attitude was based on cognition and a non-significant difference between a low affective cognitive consistency and a high affective-cognition consistency if attitude was based on affective components (Zhou et al., 2009). The cognitive and affective components of attitude were assessed using the affective and cognitive evaluations of attitude on five dimensions employed to demonstrate these components of attitude (Zhou et al., 2009). Findings from the study revealed a significant main effect of affective cognition consistency on attitude intention consistency, $F(1, 71) = 1.08, p < 0.05$. The cognition component of attitude better predicted subsequent behaviors when the study participants were exposed to high affective-cognition consistency condition, ($r(33) =$

0.35, $p < 0.05$). Zhou et al. established the effects of attitude in predicting individuals' intention with high affective-cognition consistency condition and emphasized on not simply replacing individuals' behavior with the intention if an accurate attitude-behavior relation were to be constituted.

Attitude Toward Substance Abuse

HCPs have been found to have low regard for individuals with substance abuse related problems with low regard reported by physicians (Ding et al., 2005; Lindberg, Vergara, Wild-Wesley, & Gruman, 2006), nursing staffs (Foster & Onyeukwn, 2003), general practitioners (Todd, Sellman, & Robertson, 2002), and psychiatrists (Tantum, Donmall, Webster, & Strang, 1993). Such dissatisfaction and attitude could stem from an actual or perceived lack of skills or knowledge in substance abuse disorder (Lindberg et al., 2006).

Gilchrist et al. (2011) conducted a European multi-center study to establish the regard of staff toward clients who abuse substances from Spain, Poland, Bulgaria, Slovenia, Slovakia, Italy, and Greece. A convenience sample of multidisciplinary HCPs completed the medical condition regard scale (Gilchrist et al., 2011). The entry points of study participants were from specialist addiction services, general psychiatry, and primary care and included 866 HCPs who responded to the survey (Gilchrist et al., 2011). A significantly lower regard was reported by staff toward individuals who misuse substances than for patients with other disease conditions such as diabetes and depression (Gilchrist et al., 2011). In addition, HCPs with more than 10 years experience showed lower regard for clients who misused substances than those with fewer than 10 years work experience ($p = 0.044$). Results from the study also indicated higher regard amongst

staff recruited from specialist addiction services ($p < 0.001$), general psychiatry ($p < 0.001$) than staffs from primary care (Gilchrist et al., 2011). The researchers established negative attitude toward substance users and this result was consistent across the different entry point. The importance of training, education in attitude change, and a more systematic approach towards service provisions were highlighted (Gilchrist et al., 2011).

Van Boekel et al. (2014) explored the regard of HCPs to work with individuals who misuse substances in specialist addiction services, general psychiatry, and primary care. The researchers assessed the association between the demographics of HCPs, and the dependent variables, emotional reaction, attribution beliefs, and regard for work (van Boekel et al., 2014). Study participants were randomly selected from the Netherlands Institute for Health Services Research database (van Boekel et al., 2014). The medical condition regard scale with a test- retest reliability of 0.84 and coefficient alpha of 0.87 was adopted to measure the regard of healthcare professionals. Comparable questions on attitude and belief about alcoholism and alcoholics questionnaire and the attribution questionnaire further assessed the attribution beliefs of HCPs (van Boekel et al., 2014).

The regard of HCPs in three sectors (specialist addiction services, general psychiatry, and primary care) was significantly different, ($\omega^2 = 0.40$, $F(2, 340) = 115.25$, $p < 0.001$). The highest regard for individuals who misuse substances was established in HCPs at addiction services. There was a significant difference in perception of responsibilities amongst specialist addiction professionals and general psychiatrists, [$\omega^2 = 0.05$, $F(2, 344) = 11.07$, $p < 0.001$] (van Boekel et al., 2014). In addition, emotional reactions were significantly different toward individuals with addiction, fear ($\omega^2 = 0.03$, $F(2, 342) = 5.79$, $p < 0.001$), and anger, ($\omega^2 = 0.11$, $F(2, 342) = 22.32$, $p < 0.001$). A small

effect size was observed after assessing feelings of pity by HCPs in the three-health sector (specialist addiction services, general psychiatry, and primary care; van Boekel et al., 2014).

In van Boekel et al.'s (2014) study, HCPs at specialist addiction services and general psychiatry felt less pity compared to general practitioners in primary healthcare services, and this was significant, [$\omega^2 = 0.08$, $F(2, 342) = 15.29$, $p < 0.001$]. Findings of the study established low regard amongst HCPs of general psychiatry services compared to HCPs of specialist addiction services (van Boekel et al., 2014). As inferred by the researchers, the integration and collaboration of specialist addiction services and in general psychiatry and primary healthcare services are valuable in establishing assertive outreach models. These models will translate into improved quality of care and accessibility to drug treatment by individuals who misuse substances (van Boekel et al., 2014).

Ford, Bammer, and Becker (2008) explored the causation of the attitudes of nurses to individuals who take illicit substances. The inclusion criteria for study eligibility were nurses registered with the board roll of the Australian Capital Territory. A 50% response rate was achieved from 2,666 eligible participants (Ford et al., 2008). The alcohol and alcohol problems' perception questionnaire was modified and this consisted five sub-scale measures of therapeutic attitude of the respondents. The therapeutic attitude scale was then piloted to ensure both construct and face validity (Ford et al., 2008). The associations between the independent variables, which included age, religious denomination, level of education, church attendance, current cigarette smoker, and therapeutic attitude, were established by inputting the subscales factors related to

workplace (Ford et al., 2008). Results from the research indicated a significant association with professional practice factors, namely drug and alcohol block ($df = 3$, $LR_x^2 = 44.64$, $p < 0.001$), interaction term block ($df = 6$, $LR_x^2 = 15.23$, $p = 0.018$), role support ($df = 1$, $LR_x^2 = 237.83$, $p < 0.001$), work place factors' block ($df = 13$, $LR_x^2 = 83.41$, $p < 0.001$), experience with patient group block ($df = 6$, $LR_x^2 = 137.48$, $p < 0.001$), and attitude to illicit drug ($df = 2$, $LR_x^2 = 22.9$, $p < 0.001$). In all, Ford et al. (2008) appears to be the first to explore the intention of nurses to engage in care of individuals who take illicit drugs and exhibited therapeutic attitude. Implications for practice and policies stated by the researchers included skill-mix resource allocation, provision of evidence-based guidelines in treatment, and increased willingness to enhance role support both at the individual and organizational level (Ford et al., 2008).

Emergency departments have been identified as a crucial setting for the detection of patients who misuse substance with HCPs playing an important role in detecting patients who presents with SUDs (Kellebka, Bruijns, & Hoving, 2013; Kelleher & Cotter, 2009). The knowledge and attitudes displayed to these clients may influence the treatments and care they receive (Kellebka et al., 2013). Kelleher and Cotter (2009) explored the attitude and knowledge of nurses and doctors in emergency departments toward patients who take illicit substances. Their study participants consisted of HCPs who worked at the emergency department of three university hospitals. The participants were recruited via opportunistic/convenience sampling (Kelleher & Cotter, 2009). One hundred and forty five emergency doctors completed the structured questionnaire, SAAS developed by Chapel et al. (1985). Findings from the descriptive study revealed a level of knowledge that was moderately confident ($n = 60$, 95.2%), increased perceived

confidence in identifying patients who presents with drug related problems (n = 57, 90.5%), and a near optimal attitudes displayed (Kelleher & Cotter, 2009). The need to incorporate training courses on SUDs and addictive behavior at postgraduate and undergraduate levels was therefore established. The researchers suggested a national study to establish the attitude and knowledge of HCPs in emergency departments, and an exploration of the attitudes of individuals who misuse substances toward HCPs (Kelleher & Cotter, 2009). Further, the importance of evaluating clinical practice guidelines, implementation of effective treatment strategies, and a functional pathway to manage detoxification and withdrawals in patients were reiterated (Kelleher & Cotter, 2009).

Kellebka et al (2014) explored the willingness and attitudes of emergency HCPs toward implementing brief interventions to individuals who misuse substances. Study participants recruited from junior consultants and emergency registrars in South African institutions completed the SAAS and a brief demographic survey (Kellebka et al., 2013). Responses to non-stereotypes (median = 3.1), non-moralism (median = 3.0) questions were homogenous. A relatively high score was observed for treatment optimism (median = 3.6). The willingness to implement brief intervention was expressed by the participants who indicated the importance of family involvement, paraprofessional counseling, and group therapy in drug treatment and care (Kellebka et al., 2013). The researchers emphasized the importance of trainings on substance use and addictive disorders to equip HCPs when dealing with patients who present with substance misuse disorders (Kellebka et al., 2013).

Stereotypic Attitude

Stereotype, as defined by Cardwell (1996), refers to an overgeneralized or fixed belief about a class of people or a particular group that could be misleading or false, and renders these groups immune to any form of counter evidence although not in its entirety. The word *stereotype* has generally being attributed to negative valence. Researchers in the field of social psychology have looked at the psychic process of an individual involved in constructing and operating with stereotypes (Blum, 2004). This type of attitude, when viewed as individual psychic process and cultural entities, becomes distinct disciplinary approaches of stereotypes.

Lauber, Nordt, Brainschweig, and Rossler (2006) assessed stereotypes amongst MHPs toward people with mental disabilities and analyzed the influence of work place, profession, and demographic variables. To recruit the sample of MHPs who participated in their study, Lauber et al. conducted a three-step procedure of healthcare facilities in the German-speaking part of Switzerland. Visual aids and information handouts were provided to the study participants to increase data quality (Lauber et al., 2006). The researchers conducted a computer assisted telephone interview and achieved a one-dimensional scale through factorial analysis using a five point Likert scaled opinion questionnaire. Positive depictions by the study participants were regarded as less characterizing, and the most negative depictions typified of individuals with mental disability (Lauber et al., 2006). Factors attributable to stereotypes identified by these researchers were social disturbance (R^2 adj = 3.7%), sympathy (R^2 adj = 3.6%), normal-healthy (R^2 adj = 1.6), dangerousness (R^2 adj = 3.6%) and skills (R^2 adj = 8.8%; Lauber et al., 2006). In their study, working hours, professional experience, or the type of ward

where MHPs worked had no influence on stereotypical attitudes. Although the researchers hypothesized more working hours, particularly on an acute ward, and overstretched work environments as major effects on stereotypical attitude exhibited toward individuals who were mentally challenged, findings of their study showed otherwise (Lauber et al., 2006). The researchers further established the need for MHPs to improve attitudes exhibited towards individuals with any form of mental disability (Lauber et al., 2006).

Sadler, Meagor, and Kaye (2012) explored how a single facet of public stigma differs in relation to specific mental disabilities by using the stereotype content model developed by Fiske, Cuddy, Glick, and Xu in 2002. The stereotype content model was used to establish systematic differences in discriminatory behaviors, emotional prejudice, and stereotypes identified as the three major components of stigma (Sadler et al., 2012). The overarching label of *individuals with mental disabilities*, which was investigated by the researchers, was based on warmth and competence relative to other stereotyped groups (e.g., Blacks, Jews, and women; Sadler et al., 2012). The researchers hypothesized the adoption of stereotype content model in reduction of discrimination and stigma toward individuals with mental disabilities. Study participants recruited through the Mechanical Turk completed the online survey (Sadler et al., 2012). Results obtained were consistent with the researchers' predictions that individuals living with mental disabilities were considered as less *competent* when compared to other stereotyped and overarching groups (Warmth: $M = 2.47$, Competence: $M = 1.92$). In the second study conducted by the same researchers, they recruited 74 individuals in order to establish any causal relationships between stereotype content and different variables on social structure

(Sadler et al., 2012). Individual statuses were positively correlated with competence as predicted by the researchers [$r(11) = .89, p < .001$]. Warmth was negatively correlated with competence [$r(11) = -0.81, p < .001$]. Results obtained from the study established content of stereotypes toward mental disabilities using fundamental dimensions of warmth, competence, and judgment posited by the stereotype content model (Sadler et al., 2012).

Stereotyping is an underlying factor for cognitive distortion, which leads to various forms of moralistic bias including failure of an individual to see diversity in a particular group (Blum, 2004). It is worth noting; however, that the pathological approach of an individual is less plausible to stereotyping than is prejudice (Blum, 2004). Cohen, Griffin, and Wiltz (1982) established stereotyping as a factor that influences substance abuse treatment negatively. The multiple affect adjective checklists and the external- internal locus of control test were used to determine if stereotypes exist between health professionals, addicts, and counseling students, and if the level of education alters stereotypes (Cohen et al., 1982). Findings from the study demonstrated a gross misconception towards individuals who presents with substance misuse disorder by counseling students and health professionals. The researchers further reiterated the need for recidivism and counselor-client relationship in dealing with drug-using populations (Cohen et al., 1982).

Rusch, Corrigan, Todd, and Bodenhausen (2010) assessed automatic negative stereotypes among individuals diagnosed as mentally disabled. This procedure was carried out by evaluating the effect of stereotyping on emotional reactions via the lexical decision task. The researchers also adopted the brief implicit association test index to

assess automatic prejudice displayed by the study participants (Rusch et al., 2010). Findings of their study revealed that automatic stereotyping was associated with potential mental illness self-reported shame, and more anger toward individuals who are stigmatized (Rusch et al., 2010). The researchers established automatic stereotyping as a predictor of unwanted emotional reactions exhibited toward individuals living with mental disability and emphasized the need to minimize the impact of internalized and public stigma through policies and healthcare initiatives (Rusch et al., 2010). A proffered explanation for the development of stereotypic attitudes could be related to personal experience generated from images of groups (Blum, 2004). For the same reason, stereotype in culture shapes the perception of stereotypes toward a particular group, so that the alleged characteristics could be seen in a group even when it is not actually present (Blum, 2004).

Stereotyping and Perspective Taking

A fruitful strategy sought by several researchers to reduce the negativity of stereotyping is perspective taking (Goldstein & Cialdini, 2007; Paluck, 2010; Vorauer, Martens, & Sasaki, 2009). In classic and contemporary views of psychology, it is generally believed that the perception of an individual is tied inexorably to behavior and social judgment (Fiske, 1992). Various researchers have noted that the activation of stereotypic behavior has consistently led to parallel and strong effects on social behavior and judgment (Galinsky, Ku, & Wang, 2005; Wheeler & Petty, 2001). Ku, Wang, and Galinsky (2010) explored the effects of behavior and judgment through perspective taking and conducted three different studies. These studies included measuring perspective-taking tendencies, effect of stereotype on overt behavior, and further

replicated the influence of taking perspectives on behavior and judgments. Donald's aggressiveness gave a negative correlation ($r = -.31, p = 0.89$) while competing in the prisoner's dilemma game and was positively correlated with perspective taking ($r = .42, p = .016$). Results obtained were consistent with the researchers' hypothesis (Ku et al., 2010).

The second study conducted by Ku et al. (2010) replicated the influence of taking perspective on behavior and judgment by manipulating *perspective taking*. The measured condition of interaction hypothesized by the researchers was significant, which demonstrated that taking perspective had different effects on behavior and judgment ($F(1, 29) = 9.06, p = 0.005$). In addition, more conservative attitudes were expressed ($SD = 1.39, M = 5.28$) than in other study participants ($SD = 1.42, M = 4.22, p = 0.047$). The paradigm of Donald's aggressiveness in demonstrating an implicit and relatively subtle activation of hostile intent was rated as marginally less dependent in perspective takers ($SD = 1.90, M = 1.62$). The third study conducted by Ku et al. was also consistent with their hypothesis because Donald's aggressiveness was judged to be a lot less dependent ($SD = 2.18, M = 8.33$). These researchers established a divergent influence of perspective taking on behavior and judgment irrespective of whether the variable (*taking perspective*) was measured or manipulated (Ku et al., 2010). Findings from their study provided insights into the diversity of individuals and further established the influence of social strategies on diverging individuals' behavior and judgment. From the views of these researchers, taking perspective could help develop the healthiest social bond while reducing prejudice toward selected individuals or groups (Ku et al., 2010).

The impact of perspective taking on stereotyping individuals who conform to negative stereotypic attitude might make them liable to being treated negatively compared to their peers that are less stereotypic (Wittenbrink, Judd, & Park, 2001). Therefore, it is expedient to determine the impact of perspective taking not only in individual but also at the group level. Interventions should be targeted at individuals without neglecting the intervention at group level as a whole (Goldstein & Cialdini, 2007; Paluck, 2010).

Skorinko and Sinclair (2012) demonstrated the effect of stereotype conformation by hypothesizing that increase in taking perspective of an individual is dependent on the out-group stereotypical attitude. To establish and confirm this hypothesis, the researchers conducted four different experiments (Skorinko & Sinclair, 2012). The range of stereotyping attitudes across the experiments included behavioral measure, accessibility of stereotypes via indirect measure, and essays reflecting days in life (Skorinko & Sinclair, 2012). Results obtained from these experiments suggested increased stereotyping in individuals who are highly salient and because stereotypes is used as basis for taking perspectives (Skorinko & Sinclair, 2012). Participants reflected a more positive out-group attitude towards targets that were unambiguously stereotyped by perspective takers (Skorinko & Sinclair, 2012). The researchers further confirmed increased stereotypes in out-group members of perspective takers.

As prescribed by Vorauer et al. (2009), perspective taking differs in low prejudiced individuals because they treat members of an out-group less favorably. Individuals who hold high prejudiced perspective presented no changes in taking up someone else's perspective. Further, beliefs could be attributed to an individual taking

perspective of others because *self* could serve as the basis for evaluating the feelings and thoughts of others (Skorinko & Sinclair, 2013).

Moralistic Attitude

Increasing evidence on the importance of being morally obliged within the TPB and the theory of reasoned action points out the significance of moral-normative consequences on behavior as moral convictions, tend to bend and sharpen the attitudes of the majority (Hornsey, Smith, & Begg, 2007; Sparks & Shepherd, 2002). Often, individuals tend to believe they might become socially isolated or ridiculed if they hold the position of the minority. They often keep their personal positions on particular subject matters to themselves and adopt the position of majority in the public (Sparks & Shepherd, 2002). People might also behave in a manner they believe is socially acceptable because of their level of uncertainty about what attitudes are proper, which results in a genuine change of attitude (Hornsey et al., 2007). Attitudes embedded in moral beliefs and convictions are perceived as ones that surpass an individual's threshold for cultures and persons (Hornsey et al., 2007).

Skitka, Bauman, and Terry (2005) explored the impact and universality of the mandate of moral convictions by conducting four different studies on interpersonal context. Each of the studies conducted were on the construct that people tend to get along with individuals who share their moral convictions (Skitka et al., 2005). The researchers explored the remarkable impact of moral conviction, to the extent to which individuals preferred greater physical and social distance from others with dissimilar attitudes, and the impact of moral conviction in making decisions, and on-group interaction between groups that are attitudinally heterogeneous and homogeneous (Skitka et al., 2005).

Participants in the first and second study were recruited from public places. Participants for the third and fourth studies were students enrolled in introductory psychology class who received partial credit for participating in the research (Skitka et al., 2005).

Findings from Skitka et al.'s (2005) study indicate a significant relationship in attitude strength and social distance [$F(3, 85) = 3.97, p < 0.05$]. After controlling for attitude strength and indices, age and gender significantly predicted moral conviction [$F(1, 84) = 3.89, R^2_{\text{change}} = 0.06, p < 0.05$]. Furthermore, relationship intimacy and the strength of moral conviction of the respondents had unique variance with social distance [$F(1, 83) = 5.28, p < 0.01$]. A noteworthy significance emerged between attitude extremity and social distance in areas related to legalization of marijuana and capital punishment (Skitka et al., 2005). The researchers highlighted the importance of moral conviction and its impact on attitudes. They reiterated the need to develop social psychology cognizance to moral convictions rooted in assumptions of wrong and right (Skitka et al., 2005).

Moral discourse of autonomy may sometimes be adopted by individuals who view themselves as non-aligned to the belief of a social group (Vauclair & Fisher, 2011). However, this does not play out in a community of moral discourse where people themselves are dependent on a particular social group and appraise the act of being wrong or right on the basis of social obligations, roles, and interpersonal duties (Maartensz, n.d.). To predict the moral attitude of individuals, Vauclair and Fisher (2011) utilized a cross-cultural approach to explore the influence of cultural values against the backdrop of moral attitude. The researchers adopted the world value survey to measure the moral attitudes of their respondents. A preliminary analysis was further conducted via the

principal component analysis factor structure (Vauclair & Fisher, 2011). Schwartz value survey archival data were also employed to measure cultural values (Vauclair & Fisher, 2011). Individual level predictors explored included political orientation, income, religiosity, and socio-demographic variables. Analysis was done via multilevel modeling (Vauclair & Fisher, 2011).

Findings from the study indicated severe attitudes towards illegal-dishonest issues with a mean of [2.21 ($SE = .07$, $p < .001$)] (Vauclair & Fisher, 2011). Attitudes toward issues that were illegal or dishonest were moderated by different interactions of harmony-mastery, egalitarianism-hierarchy, religiosity and harmony mastery, income, and egalitarianism (Vauclair & Fisher, 2011). A significant grand mean of [3.53 ($SE = 0.15$, $p < .001$)] indicated a more severe judgment to illegal-dishonest issues. Vauclair and Fisher (2011) demonstrated that individuals' moral attitudes could be predicted with cultural value *embeddedness* and further established idiosyncratic and universal facets of morality across different cultures.

To assess how individuals react to and reason when faced with several situations pertinent to moral attitudes and to expand the scope of moral psychology, researchers have gone a step ahead to establish moral convictions and values as they relate to the extent of a particular believe or attitude (Bartels, Christopher, Fiery, David, & McGraw, 2014; Graham, Haidt, & Nosek, 2009). A variety of outcomes, such as perception of justice, perception of legitimacy, and tolerance, have been related to the subjective sense of individuals' moral conviction (Skitka, 2002; Skitka et al., 2005; Wright, Cullum, & Schwab, 2008).

Brandt and Wetherell (2012) predicted that moral attitude could be experienced in people because it promotes group survival. They hypothesized that moral attitude is heritable. To test this hypothesis, the researchers recruited university students and measured the strength of attitudes, which included certainty, importance, centrality, and extremity (Brandt & Wetherell, 2012). The heritability coefficient was used to measure attitude heritability using a 5-point Likert scaled attitude items developed from the public opinion inventory of Eysenck (1954). The researchers also measured religious convictions, importance, attitude, centrality, and certainty (Brandt & Wetherell, 2012).

The association between attitude heritability and accessibility was measured using Tesser's analytical strategy. Fixed-effects multi-levels were adopted to measure moral conviction (Brandt & Wetherell, 2012; Tesser, 1993). Results from Brandt and Wetherell's study reflected marginal positive association between moral convictions measured by religious conviction, [b (se) = 0.31(0.01), $p < 0.001$], importance [b (se) = 0.42 (0.01), $p < 0.001$], centrality [b (se) = 0.61 (0.01), $p < 0.001$], extremity [b (se) = 0.45 (0.02), $p < 0.001$], and overall attitude heritability (Brandt & Wetherell, 2012). The researchers further replicated the study by testing the association between morality and attitude heritability. Eligible participants for their second and third studies were non-university students in order to eliminate the notion that university students tend to exhibit attitudes that are less well informed (Sears, 1986). The results of the second and third study confirmed the relationship between sense of moral conviction and heritable attitudes (Brandt & Wetherell, 2012). The researchers further established heritability of attitude and the extent to which a particular attitude is viewed as moral. They reiterated

the importance of moral conviction on attitude heritability and behavioral measures (Brandt & Wetherell, 2012).

Moral propositions have been arguably described as an expression of attitude, which points to the fact that attitude, might be independent of intellectual honesty (Maze, 1973; Ray, 1981). Furthermore, a spiral of silence phenomenon, as described by Noelle-Neiman (1993), expresses inhibitory attitude toward a particular principle due to perception of holding a minority opinion and this theoretically leads to a level of marginalization that is self-reinforcing. Consistent with this notion, individuals might differ in attitude based on their moral conviction (Noelle-Neiman, 1993).

Hornsey et al. (2007) explored the impact of norms in individuals with moral conviction. Study participants were convinced that their attitudes towards legalizing euthanasia voluntarily and on apologizing to Aborigines were shared by either the minority or majority of the members of the group (Hornsey et al., 2007). The researchers measured the intention toward publicly speaking and the extent to which they behaved in the manner by speaking-out after the study participants has been exposed to normative information (Hornsey et al., 2007). Results from the study indicated a significant increment in the explained variance of normative support ($\beta = .36, p = .008$) and moral basis for attitude [$R^2_{\text{change}} = 0.15, F(3, 96) = 5.69, p < 0.001$]. A significant correlation was also obtained for speaking out on behavior and intention ($r = 0.27, p < 0.001$). A three-way significant interaction was observed between perception of change, moral basis for attitude, and normative support, [$R^2_{\text{change}} = 0.04, F(1, 159) = 6.76, \beta = -0.28, p = 0.01$] (Hornsey et al., 2007). Findings from the researchers established individuals' attitude toward being identified publicly and a counter-conformity intentions to speak out morally

among morally convicted individuals. Therefore, there is an increased intention to counter-conform in individuals with strong moral convictions for attitudes willing to express their resolve (Hornsey et al., 2007).

Stigmatizing Attitude and Prejudice

Healthcare professionals' stigmatizing attitudes toward individuals with substance abuse addictive disorder may affect drug dependence treatment and care negatively and could lead to interception or avoidance of treatment (Ball, Carrol, Canning-Ball, & Rounsaville, 2006; Neale, Tompkins, & Sheard, 2008). Several researchers have documented the negative impact of stigma exhibited toward individuals on drug dependent treatment and the effects on the outcome of care, which includes, but is not limited to, diagnostic overshadowing, reduced therapeutic alliance, and lack of effective communication between patients and HCPs (Palmer, Murphy, Pisseli, & Ball, 2009; Schomerus et al., 2011).

Louma et al (2007) examined the impacts of stigma on individuals who present with substance abuse and related disorders. These researchers surveyed 197 patients from eleven public treatment agencies representing 15 different sites involved in substance abuse treatment. Questionnaire packets completed by study participants included the quality of life scale, which was employed to measure family contact, social activity, and tasks of daily living; the general health questionnaire; the substance abuse perceived stigma scale; secrecy coping scale; stigma related rejection scale; the internalized shame scale; and the acceptance action questionnaire (Louma et al., 2007). The study participants expressed different levels of interpersonal rejection and enacted stigma.

A moderate correlation was found between psychological functioning and internalized shame as measured by the global mental health ($r = -.487$), quality of life ($r = -.487$) and the acceptance action questionnaire ($r = .564$). However, increased internalized shame ($r = .32$), lower QoL ($r = .23$), perceived stigma ($r = .42$), past stigma related rejection ($r = .39$), and psychological flexibility measured as number of days of employment problems ($r = .20$) were associated with elevated levels of coping secrecy with substance abuse addictive disorders (Louma et al., 2007). Findings from Louma et al.'s (2007) study reflect the level of stigma perceived by people receiving drug dependence treatment and reiterate the importance of interventions and policies targeted toward reducing the impact of stigma on individuals who presents with substance abuse related disorders.

Stigmatization may lead to chronic stress, stemming from expectations of rejection or actual rejection by others. This may result into further harm to mental well-being, isolation and withdrawal (Krieger, 1999; Link, Struening, Rahav, Phelan, & Nuttbrock (1997). The fear of being stigmatized in itself may lead to inefficient treatment and reduced quality of treatment received (Miller, Sheppard, Colenda, & Magen, 2001). Further, in response to being discriminated and stigmatized by the society and healthcare practitioners who are meant to be at the forefront of helping these individuals integrate into the society, these individuals may sometimes respond to stigmatization in ways that could mitigate or exacerbate psychological attributes and emotional responses (Krieger, 1999).

Ahern, Stuber, and Galea (2007) explored discrimination, stigma, and the health of individuals who abuse substances. Participants in this study were recruited from the

neighborhoods of New York City between August 2000 and January 2001 via the street outreach techniques. The survey captured different domains of discrimination, alienation, stigma, and perceived devaluation. The study's health measures ranged from the Center for Epidemiological Studies Depression Scale (Roberts & Vernon, 1983) and the medical outcome study short form (Falck, Wang, Siegal, & Carlson, 2000). An overall scale used in standard practice was also created to measure the physical and mental wellbeing of the study participants (Ahern et al., 2007).

The discrimination and stigma scales were examined using the linear regression and results obtained after statistical analysis reflected associates of poorer mental health ($\beta = .61, p < 0.001$) and physical health ($\beta = .59, p < 0.001$) with stigma and discrimination (Ahern et al., 2007). The theoretical measures used by the researchers pointed out the associations between high levels of discrimination and stigma and poorer physical and mental health (Ahern et al., 2007). Although, stigmatization and discrimination of individuals who misuse substances may serve as deterrents, this may consequently lead to poor physical and mental wellbeing among drug using populations (Ahern et al., 2007).

A study conducted in China by Luo et al. (2014) explored the stigmatization of drug using populations living in Hunan province due to the punitive approaches imposed by the Chinese government between 1990 and 2007. The study participants were randomly selected in two different communities of the province of Hunan (Luo et al., 2014). The attitude and knowledge, vignettes, stereotyping, and social distance of the study participants toward individuals with drug dependent addictive disorders were examined. Chi-square calculations and ANOVA were utilized to compare the level of

stigma toward individuals who presented with methamphetamine dependence, heroine dependence, and individuals who did not indulge in substance misuse (Luo et al., 2014).

Socio-demographic variables, classified by marital status, education, gender, income, and age were employed to establish predictors of public attitude (Luo et al., 2014). The findings from the study conducted by Luo et al. (2014), revealed widespread stigmatizing attitudes toward drug using populations with community rejection being evoked by negative stereotypes ($F(df), 790.8(3)$, $X^2(df), 535.8(3)$, $p < 0.001$). The researchers emphasized the need for interventions and policies targeted at reducing discrimination and stigmatization of drug using populations. This will translate into improved access to drug dependence treatment, and overall mental and physical wellbeing of individuals who present with substance misuse disorders (Luo et al., 2014).

HCPs stigmatizing attitudes towards condition that are not regarded conventionally as mental disabilities have also been well documented. Such conditions include chronic fatigue syndrome, learning disability, and personality disorders (Rao et al., 2009). Stigma depreciates people's worth due to its distinguishing characteristics. Stigma has been identified as a major impediment to seeking treatments by mentally challenged individuals (Bernat & Davido, 2000). Recognized by the *World Psychiatric Association* and the *World Health Organization*, Stigmatizing attitudes are strongly associated with poverty, disability, and suffering. This was echoed by the safer services report (Appleby, 2000; Corrigan & Watson, 2006).

Rao et al. (2009) assessed health professionals' stigmatizing attitudes toward individuals with mental disabilities. Study participants were recruited from acute medical trusts and mental health trust from different National Health Service Trusts. The attitudes

of the 108 participants were assessed via the attitude to mental illness questionnaire (Rao et al., 2009). The study participants were further randomized into control or experimental groups based on either simple or hypothetical descriptions of patients suffering with alcoholism or opiate dependence (Rao et al., 2009). Results from the non-parametric analysis (Mann-Whitney) pointed to the fact that opiate dependence patients ($U = -1.0$, $n = 50$, $SE = 0.5$) and individuals with alcoholism ($U = -3.0$, $n = 54$, $SE = 0.5$) were highly stigmatized among the control group (Rao et al., 2009). The researchers established stigmatizing attitude amongst health professionals toward individuals who relapsed after treatment versus patients who recover from addictive disorders (Rao et al., 2009). Suggested methods to combat stigmatization expressed by the researchers included employing the services of mass media to educate HCPs and members of the public about the different forms of mental disabilities (Rao et al., 2009).

HCPs' Perception of SUD Treatment and Care

To support individuals with substance use problems and related disorders, therapeutic skills of HCPs have been highlighted as essential to disengage easily from drug use when individuals are exposed to services aimed at supporting them (Howard & Holmshaw, 2010). The style of interaction and therapeutic approach of HCPs could therefore be key to work effectively with this group of clients (Carey, 1996). The ability to interact with individuals who misuse substances is dependent on emphatic but confrontational philosophy exhibited by HCPs (Price, 2002). This is particularly important to understand the views, language, and behavior of this client group, and to develop genuineness and trust that are greatly needed but often unspoken (Price, 2002).

Howard and Holmshaw (2010) explored the perceptions of inpatients' staff toward the provision of care to patients who present with illicit substance use disorders and co-occurring mental disabilities. A mixed mode approach was conducted to validate findings from different sets of data generated using triangulation. Study participants were recruited from residential rehabilitation units and treatment wards of mental units (Howard & Holmshaw, 2010). Eighty-four multidisciplinary HCPs from a sector of the mental health trust responded to the co-occurring mental health and illicit substance use perception questionnaire. Ten multidisciplinary in-patient staffs participated in the in-depth interview (Howard & Holmshaw, 2010). Results from the research established training as a significant predictor of HCPs' perception ($t = -4.15$, $SD = 17.9$, $M = 80.1$, $p < 0.0001$) with more negative individuals who have not received any form of training on substance abuse and related disorders (Howard & Holmshaw, 2010). Team attitude was identified as a theme from the structured interview, which reflected dissatisfaction towards dealing with individuals who presents with substance use disorders.

Staff support structures as a theme identified low regard expressed by service users and inability to access supervisors' knowledgeable in dealing with abuse (Howard & Holmshaw, 2010). The theme *working with individuals who abuse substances* identified inability to maintain a safe environment. Therapeutic engagement of clients was viewed as major problems encountered when dealing with substance abuse clients because they tend to elicit aggressive and violent behaviors (Howard & Holmshaw, 2010). Training as a theme reflected dearth of knowledge in dealing with clients, which identified topic areas such as legal perspective, basic drug awareness, and techniques to support clients as high priority topics (Howard & Holmshaw, 2010). The researchers

recommended review of multidisciplinary and interagency working structures to improve collaborative efforts and review of groups and individual supervising structures that will increase accessibility and effectiveness in both residential and in-patient drug treatment areas (Howard & Holmshaw, 2010). In addition, they recommended an introduction of training programs structured and targeted at disseminating roles and responsibilities of staffs in the provision of drug treatment and care to individuals who misuse substances (Howard & Holmshaw, 2010).

Natan, Beyil, and Neta (2009) examined the perception of nurses toward the provision of quality healthcare to addict clients by adopting the theory of reasoned action. Nursing staff members with high probability of providing drug abuse treatments and care from the departments of internal medicines in Israel were recruited to participate in the study (Natan et al., 2009). One hundred and thirty five study participants responded to a purposively designed questionnaire developed to assess behavior, attitudes, and perceived expectations toward behavior (Natan et al., 2009). Results from the study indicated a negative significant correlation between actual behavior and stereotypes toward individuals who misuse substances ($r = -0.32, p < 0.01$).

Furthermore, it was inferred that respondents with less stereotypic views perceived higher provision of quality of care than those that held more stereotypic views (Natan et al., 2009). The study participants recruited by these researchers, reported they were knowledgeable and felt confident that they understood problems associated with drug use problems to provide adequate care and treatments (Natan et al., 2009). Perception of subjective norms as presented by the study participants reflected they tend to attribute moderate significance to families, patients, and colleagues' opinion (Natan et

al., 2009). Behavior and attitude were therefore significantly associated with attitude and intention ($p < 0.05$, $r = 0.61$) and subjective norms ($p < 0.05$, $r = 0.32$; Natan et al., 2009). The researchers established the importance of changing stereotypical attitude of nurses. This can be achieved by holding workshops aimed at providing coping skills. The researchers also noted that it is important to emphasize the rights of patients who receive drug treatments and care, and this should be done without bias (Natan et al., 2009).

Perception of Role Legitimacy and Role Adequacy

The constructs of role legitimacy and role adequacy are adjudged important in estimating the practice of HCPs toward substance abuse. These constructs have received substantial attention in the literature (Farmer & Greenwood, 2001; Skinner, Roche, Freeman, & Addy, 2005). Whilst role perception, measured in terms of role legitimacy and role adequacy, are often integrated into assessing effectiveness of trainings, it is suggested that the two constructs are the framework of motivational factors regarding issues related to substance abuse and role satisfaction experienced by MHPs (Skinner et al., 2005). Highlighted over 30 years by Shaw, Cartwright, Spratley, and Harwin (1978), the impact of role legitimacy and role adequacy on professional practice is influenced generally by key role requirements such as work experience, substance use disorder education, advice, and support. Further, it was arguably established by the researchers that work settings and supervision enable individuals to acquire knowledge in an environment that is non-threatening, to develop knowledge on dealing with individuals with substance use disorders, to acquire skills from experienced professionals, and to develop expectations that are realistic (Shaw, et al., 1978).

Skinner et al. (2005) explored the impact of role legitimacy and role adequacy on healthcare professionals' role satisfaction and motivation. The researchers established the extent to which experience, education, and support predicted role legitimacy and role adequacy, and its influence on satisfaction and motivation regarding SUD related work. Study participants were identified from the Australian Health and Human Services (AHHS) comprising of 1024 HCPs and 351 MHPs who were recruited for the purpose of their research (Skinner et al., 2005). To assess predictors of systems factor, team cohesion, and organizational support, the researchers adopted the work practice questionnaire developed by Addy et al. (2004). The work practice questionnaire subset scales further addressed SUD related work practice such as role support, role legitimacy, work motivation, role adequacy, and job satisfaction (Skinner et al., 2005).

The main effect of role legitimacy and on role requirements, as demonstrated by Skinner et al. (2005), reflected a higher association between role support, [$B = .26$, 95% CI (0.61- 0.36), $\beta = 0.35$, $R^2 = 0.31$] and usefulness [$B = 0.21$, 95% CI (0.11- 0.31), $\beta = 0.28$]. Findings from the study established role support as the strongest predictor of role adequacy and role legitimacy. These predictors were highlighted as the primary workforce in strategy development (Skinner et al., 2005). The researchers reiterated the importance of recognizing and reinforcing healthcare professionals' ability to undertake expected role as a contributory factor to prevent burnout (Skinner et al., 2005).

Loughran et al. (2010) explored the predictors of role adequacy and role legitimacy of social workers working with individuals who misuse substances. The researchers surveyed mental social workers field instructors as well as current students, alumni, and recent graduates of the schools of social work in the United States (Loughran

et al., 2010). Of the 735 emails sent out to eligible study participants, only 200 mental social workers responded to the survey. A 28% response rate was achieved after discarding three identical responses (Loughran et al., 2010). To study role support, role legitimacy, and role adequacy, the researchers adopted the DDPPQ. Results of the study indicated significant association between mental social workers who had higher contact with individuals who take illicit substances, $F(2, 163) = 9.13, p < 0.001$, and mental social workers with more training in SUD, $F(2, 191) = 3.39, p < 0.05$ (Loughran et al., 2010). Further, role legitimacy was significantly associated with level of education, masters' degree, $F(1, 191) = 6.02, p < 0.05$, intervention, $F(2, 192) = 5.96, p < 0.01$, and licensure course, $F(1, 185) = 17.86, p < 0.001$. The ANOVA identified intervention, $F(2, 188) = 67.17, p = 0.001$, trainings, $F(2, 187) = 55.20, p < 0.001$, increased contact with SUD clients, $F(2, 160) = 13.22, p < 0.001$, and the gender of mental social workers, male, $F(1, 184) = 14.66, p < 0.001$ were significantly associated with role adequacy (Loughran et al., 2010). The researchers established the importance of training, role support, years of experience, and education as predictive factors of role adequacy and role legitimacy (Loughran et al., 2010).

Predictors of Attitude

The range of variables identified as predictors is more client-centered and it includes motivation, gender, younger age, treatment readiness, greater cognitive dysfunction, and minority group status (Ball et al., 2006; Claus, & Kindleberger, 2002). The attitudes of healthcare workers play a major role in treatment retention and affect the quality of drug treatment provided (Caplehorn, Hartel, & Irwig, 1997; Humphreys, Noke, & Moos, 1996). It was particularly important to understand the predictors of MHPs

attitude and perception of their role that could explain the variance of treatment completion and retention due to high dropout rates in rehabilitation centers (Caplehorn et al., 1997).

Russel, Davies, and Hunter (2011) explored the disease and choice models of addiction to establish predictors of substance-addiction providers' beliefs. The beliefs of the addiction treatment providers recruited from the United Kingdom ($n = 372$) and United States ($n = 219$) were assessed using a five point Likert scale of addiction belief scale developed by Schaler (1992). The spiritual belief scale was used to measure the thinking of addiction treatment providers via the humility, gratitude, tolerance, and release subscale (Russel et al., 2011). In an attempt to establish variance in addiction treatment providers' beliefs about substance addiction, the researchers conducted hierarchical multiple linear regression using three different factor analysis of the addiction belief scale, 'addiction is a choice', 'addiction and coping with life', and 'addiction is a disease' (Russel et al., 2011).

Predictors of addiction treatment providers' level of confidence viewing addiction as a disease identified by both the spiritual belief scale and the addiction believe scale score were age ($\beta = 0.15, p < 0.001$; $\beta = 0.40, p < 0.001$), provision of for-profit/private treatment ($\beta = 0.10, p < 0.01$), professional membership ($SD = 0.09, M = 29.61$), disease beliefs ($SD = 7.39, M = 27.60$), years of experience ($\beta = 0.13, p < 0.01$), not for profit/public treatment ($SD = 6.15, M = 26.96$), and personal addiction problem ($\beta = 0.10, p < 0.05$). All factors reflected positive associations with factor 1 score (Russel et al., 2011). Predictors of addiction treatment providers' level of confidence viewing addiction as a choice included all the aforementioned variables, which reflected negative

associations with factor 2 score. In addition, the significant associations with factor 1 and factor 2, being a female, predicted addiction treatment providers' level of confidence toward viewing addiction as a way of life ($\beta = 0.12, p < 0.01$). The strongest predictor choice model of beliefs toward addiction was past personal addiction (Russel et al., 2011). The findings of the study reflected conflicting beliefs on the concept of addiction in the treatment communities sampled within United States and United Kingdom and a clear potential for diversity as it relates to addiction beliefs (Russel et al., 2011).

In an attempt to establish factors that may predict healthcare professionals' intentions to care, Crothers and Dorrian (2011) examined the predictors of nurses' attitudes towards caring for patients with substance abuse related disorders with a special focus on alcohol misuse. Demographic characteristics of nurses, the beliefs, and attitudes toward symptoms, and causes of problems associated with alcohol use were explored (Crothers & Dorrian, 2011). The researchers surveyed nursing staff that worked at the large Australian Metropolitan Teaching Hospital after an educational session. Socio demographic variables accessed included years of employment, age, sex, education in alcohol and drug nursing, management role, experience of individuals with substance abuse related problems, ward currently employed, service attendance, role (registered or enrolled nurse), and personal use of substances (Crothers & Dorrian, 2011).

The researchers adopted the shortened alcohol and alcohol related perception questionnaire, the Seaman-Mannello nurses' attitude toward alcoholism scale and the Marcus alcoholism questionnaire to access the attitudes of the respondents (Crothers & Dorrian, 2011). Results from the study revealed significant differences on personal drinking habit with number of standard drinks ($F = 4.853, p < 0.05$) and satisfaction on

alcohol consumption scores ($F = 3.516, p < 0.05$). Correlations between the subscales of Seaman-Mannello nurses' attitude toward alcoholism scale reflected a non-significant relationship with age of respondents (0.27 & 0.07) respectively (Crothers & Dorrian, 2011). The Marcus alcoholism questionnaire also reflected no significant relationship in nurses' attitude and number of standard drinks, consumption of alcohol, service attendance, religious affiliation, personal experience, and role. The shortened alcohol and alcohol related perception questionnaire found a negative and moderate relationship between age and the subscale of pessimism ($r = -0.35, p < 0.05$; Crothers & Dorrian, 2011). Multiple regression analysis reflected positive significant effect on scores from the Seaman-Mannello nurses' attitude towards alcoholism scale and accounted for 38% of variance. Scores on number of standard drinks from the permissive subscale also accounted for 34% of variance after controlling for age of the respondents (Crothers & Dorrian, 2011). The researchers established association between attitude of respondents and personal characteristics (Crothers & Dorrian, 2011).

Findings from the study of Crothers and Dorrian (2011) built on the suggestion that personal experience, religion, and level of education influences healthcare professionals' attitude toward substance misuse clients (Allen, 1993; Howard & Chung, 2000a, 2000b) by establishing that age could have an impact on attitude. The researchers affirmed the importance of workplace environment, retention rates of nurses and patient outcome on motivation, and satisfaction in nurses' role. They suggested future research on the influence of attitude on actual care of clients that misuse substances (Crothers & Dorrian, 2011).

Impact of Trainings on Attitude of MHPs

The provision of evidence-based practices has been efficacious in treating individuals with mental health disabilities and this can only be acquired through trainings (Beidas & Kendall, 2010; Silverman & Hinshaw, 2008). Numerous studies established the importance of adapting empirically based trainings of MHPs in attaining change in attitude and level of knowledge generally (Aaron, Hurlburt, & McCue Horwitz, 2010; Nelson & Steele, 2008; Sanders, Prinz, & Shapiro, 2009). Research conducted by Lim et al. (2012) explored the impact of workshop trainings on evidence based practices' attitude and knowledge of community MHPs through a cross-sectional survey conducted prior and after the training workshops. The researchers adopted a 40-item knowledge evidence based services questionnaire with previous demonstration of test-retest reliability and five subscale factors consisting of attention/hyperactivity, problem, disruptive behavior and withdrawn/depressed (Lim et al., 2012).

Furthermore, an evidence based practice attitude scale was used to generate four attitude subscales consisting of divergence, requirements, openness, and appeal as defined by the researchers (Lim et al., 2012). Providers' attitude was also assessed using the modified practice attitude scale. The hierarchical linear modeling software was used to analyze both the pre-and post-training data collected by the researchers (Lim et al., 2012). The findings from their research revealed an increase in modified attitude score by 2.02 points ($SE = 0.69, p < 0.01$) after conducting core practice elements for anxiety and trauma trainings and by 1.61 points after attending trainings on elements for disruptive behavior ($SE = 0.80, p < 0.05$; Lim et al., 2012). Findings also revealed significant changes in the level of knowledge and attitude of MHPs toward mental disabilities

generally (Lim et al., 2012). The researchers established the importance of modular evidence based practice trainings when utilized purposefully as a trigger or preliminary step when training MHPs (Lim et al., 2012).

Substance-Abuse-Related Studies in Nigeria

Nigeria has a total area of 923, 763 km² and it is the most populous country in Africa with approximately 174 million inhabitants. Of this number, 45% are below 15 years (Congress of the Association of African Historian [CAAH], 2013; United Nations Children Education Fund, 2013). Located in the Gulf of Guinea, Nigeria lies between longitudes 2° and 15° east and latitudes 4° and 14° north (CAAH, 2013). This West-African country is about twice the size of California and is the 32nd largest country in the world after Tanzania (CAAH, 2013). With more than 500 spoken languages, the country boast of diverse ethnic mix (over 250 ethnic groups), of which three (Ibo, Hausa and Yoruba) are spoken by 62% of the population (CAAH, 2013). In an attempt to facilitate the linguistic and cultural unity of Nigeria due to its catalogue of languages, English was chosen as the official language of the country (UNICEF, 2013). The religious practice in the country accentuates its ethnic and regional distinctions that have been apparently divided into two main religions. Christianity predominates in the southern part of the country and Islam in the north (CAAH, 2013). This also plays a major role in the culture of Nigeria, which has 36 states and a federal system of government (CAAH, 2013).

Although the treatment and recognition of mental disabilities in the country predates written records, not until the early 20th century was the mental health service delivery tailored according to western models (Ayorinde, Gureje, & Lawal, 2004). Only eight regional federal neuropsychiatric hospitals, departments of psychiatry and a number

of general hospitals provide mental health services in the country (Ayorinde et al., 2004). Accessibility and availability of mental health services reflect rural to urban and northern to southern skew as most mental health services are in the southern and urban centers of the country (Ayorinde et al., 2004).

Several studies conducted in Nigeria have focused primarily on substance use in Nigerian colleges (Abayomi, Onifade, Adefulosi, & Akinhanmi, 2013; Amaele, 2012; Awosusi & Awogboyega, 2013; Ekpenyong, 2012; Essien, 2010; Oshikoya & Alli, 2006), amongst adolescents (Fareo, 2012), use of psychoactive substances among Nigerian inmates (Adesanya, Ohaeri, Ogunlesi, Adamson, & Odejide, 1997), and trends in the use and abuse of substances (Pela, 1989). This much cannot be said about studies on Nigerian MHPs as it relates to dealing with individuals who misuse substances.

To establish up-to-date data on treatment capacity as it relates to substance abuse within Nigeria, Onifade et al. (2011) conducted a cross-sectional descriptive survey of the characteristics, spread, and types of available substance abuse treatment centers within the country. Substance abuse treatment units that attended training sessions at TREATNET centers were eligible to participate in the study using a LimeSurvey (Onifade et al., 2011). The 31 substance abuse training units that responded to the survey were located in the Northeastern and Southwestern geopolitical zones of the country. Sixteen of the treatment units (51.56%) were specialized residential units; five (16.1%) were located in prison, and 17(54.8%) were specialized non-residential units (Onifade et al., 2011). Findings from the descriptive study indicate lack of funds from health insurance, as funding was received from international organizations, private income of clients, and from charitable donations (Onifade et al., 2011).

The total units' capacity was 560 (mode = 20, median = 27, max = 80, min = 12), new admissions totaled 765 (median = 26.5, mean = 48, max = 147, min = 0), and the average rate of drug treatment and completion was 70.2% (max = 100, min = 0, median = 79%). Six (37.5%) of the units considered provision of housing as the sole responsibility of the patients' relative, 10 (62.5%) and 12 (75.0%) of the units provided psychiatric and primary care respectively (Onifade et al., 2011). Although recent findings suggests that 8% of individuals who abuse substances reported cocaine, pentazocine, heroine, and speed ball as substances that were majorly injected (Adelekan & Lawal, 2006), none of the substance abuse treatment units in Nigeria provided needle exchange services (Onifade et al., 2011). Quality improvements of service provision were undermined due to lack of evaluations of drug treatment outcome and processes in half of the units.

Onifade et al. (2011) established a great gap in meeting the needs of individuals who presents with substance use disorders due to lack of comprehensive treatments (Onifade et al., 2011). The researchers recommended the incorporation of drug treatment evaluation into treatment policies and systems to plan interventions that are evidenced and needs based. Onifade et al. established the efficiency and effectiveness of interventions that are consistent with drug treatment plans (Onifade et al., 2011).

Ekpenyong (2012) assessed the perception, extent, and causes of drugs and substance abuse amongst Nigerian students. In addition to the study objectives, the researcher evaluated and analyzed the strategies employed to tackle the use of substances, and the shortcomings and effectiveness of the strategies in place to address substance use in Nigerian secondary schools (Ekpenyong, 2012). The study of Ekpeyong (2012), which was theoretically guided by the modified social stress model (Rhodes & Jason, 1988),

provided an in-depth understanding of the protective and risk factors that could predispose an individual to the use of substances. Pupils of four public secondary schools in the local government area of Southern Ijaw, Community secondary school Angiana, Government secondary school Amassoma, Community secondary school Eniwari, and the Southern Ijaw secondary school Oporoma, all in Bayelsa state Nigeria, were purposively sampled.

Findings from the study revealed that over half of the study participants (60%, 222) had negative perception toward substance abuse and drugs generally. Approximately 31% (116) of the respondents had positive perception, and 8.6% of the respondents reflected indifferent perception toward the use and abuse of substances (Ekpenyong, 2012). With a rate of 33.8% drug use amongst the secondary school students surveyed, the researchers documented the types of substances abused, which included bhang, marijuana, and alcohol (Ekpenyong, 2012). The effect of substance abuse on cognition and behavior of students documented by the researchers included withdrawal, lack of concentration, indiscipline, lack of interest in schoolwork, and poor relationship with others (Ekpenyong, 2012). The researchers recommended educational intervention programs, punitive measures, and behavioral modification techniques as ways of mitigating the threat and challenges of substance abuse amongst Nigerian secondary school students (Ekpenyong, 2012).

James and Omoaregba (2013) assessed the opinions and attitudes of Nigerian medical students toward individuals who use and abuse substances. Study participants were medical students of the federal neuropsychiatric hospital who had completed their 10-week psychiatry clerkship and were in their fifth year (James & Omoaregba, 2013). A

response rate of 95.24% (210 students) was obtained. The respondents were provided a modified version of the SAAS (James & Omoaregba, 2013). The Likert-scaled questionnaire was pilot-tested amongst 20 students. Responses obtained from individuals who were eventually excluded from the study identified ambiguous wordings, and the length of the questionnaire was subsequently reduced from 50-items to 32-items (James & Omoaregba, 2013).

Findings from the study reflected positive attitudes toward individuals who abuse and use psychoactive substances with an overall mean score of 86.18 (12.29). Female medical students had lower mean score (85.18) compared to their male colleagues (87.17). Respondents that indicated family history of cannabis use ($p < 0.001$), nicotine ($p < 0.002$), tobacco ($p < 0.001$), and alcohol use ($p < 0.02$) showed less stigmatizing attitudes towards clients who use and abuse psychoactive substances (James & Omoaregba, 2013). The researchers suggested incorporating trainings on psychoactive substances in continuous professional developments beyond residency years and medical schools (James & Omoaregba, 2013).

Jack-Ide, Uys, and Middleton (2013) explored the direct impact of the Nigerian mental health policy, formulated in 1991, on the provision of mental health services at a federal neuropsychiatric hospital in Nigeria. To identify challenges, difficulties, and implications of mental health policy in service delivery, nurses working at the neuropsychiatric hospital, Rivers state, Nigeria were purposively recruited in the study (Jack-Ide et al., 2013). Twenty nurses participated in a semi-structured, in-depth interview. Information about their experiences in providing services was evaluated within the context of the policy (Jack-Ide et al., 2013). Four domains for systematic evaluation,

outcomes, resources, content, and provision, were identified as elements for mental health program implementation and service assessments (Jack-Ide et al., 2013). Findings from the study reflected negative and stigmatizing attitudes amongst mental health nurses, policy failure, and lack of provision for the post of a director in the Nigerian Ministry of Health as major obstacles to proper governance and high priority status (Jack-Ide et al., 2013). Inference deduced from the study suggested the importance of implementing mental health treatment policies to reduce associated burdens, improve uptake, and access to treatment (Jack-Ide et al., 2013).

Research Model

The studies reviewed presented information on attitude and perception of HCPs in European countries and South Africa, with particular attention on nurses and general practitioners who work in emergency departments (Ford et al., 2008; Gilchrist et al., 2011; Howard & Holmshaw, 2010; Kalebka et al., 2013; Kelleher & Cotter, 2009; van Boekel et al., 2014). Although these studies reflect the attitude and perception of HCPs toward substance abuse and related disorders, none of these studies was conducted in Nigeria. Moreover, no study explored regional variation in attitude as it relates to dealing with individuals who abuse substances.

Despite persistence increase in illicit drug use in Nigeria, the aforementioned literature reflected dearth of knowledge in attitude of multidisciplinary MHPs and perception of their role in tackling SUDs in Nigeria. The multiethnic nature, cultural diversity of the country, and the regional variation in prevalence of substance abuse within the geopolitical zones of the country also made it possible to address regional variation in attitude of multidisciplinary MHPs. In addition to documenting the attitudes

and perception of MHPs toward tackling substance abuse and related disorders in Nigeria, this quantitative study was aimed at addressing the gap in the literature by assessing whether significant regional variations exist in attitude of multidisciplinary MHPs when dealing with drug using populations. In light of the impact of attitude on patient care; it was also crucial to identify areas where development of MHPs is needed by assessing predictors of attitudes and perception in this class of professionals.

Summary

This chapter provided a succinct outline of current literature that grounded the applicability of the identified gap via the TPB. Studies related to the method, constructs, and rationale for both independent and dependent variables were further justified from the literature. In addition, studies that demonstrated attitudes and perception of HCPs, tools for data collection (SAAS & DDPPQ) and covariate variables were reviewed and concisely synthesized. In chapter 3, I defined the study population and discussed the estimated sample size, the sampling strategies, and procedures for data collection. Participation and recruitments are stated unambiguously. They provide a narrative summary of the methodology adopted in the study.

Chapter 3: Research Method

Introduction

The purpose of this study was to assess multidisciplinary MHPs' attitudes about the use and abuse of substances and to assess how they perceived their role in tackling substance abuse and related disorders in Nigeria. The study also sought to identify predictors of perception and to explore possible regional variations in attitude toward the five subscale factors of SAAS: permissiveness, treatment intervention, non-stereotypes, treatment optimism, and non-moralism. The following research questions guided the study:

1. What types of attitude do MHPs hold regarding the use and abuse of substances in Nigeria?
2. What are MHPs' perception of their role in tackling substance abuse and related disorders in Nigeria?
3. Can gender, age, educational attainment, profession, region, role support, and work motivation predict MHPs' perception of their role in tackling substance abuse and related disorders in Nigeria?
4. Is there a significant regional variation in attitude amongst multidisciplinary MHPs when dealing with drug-using populations in Nigeria?

In this chapter, I discuss the research design and its consistency with the choice of approach and connections to the research questions. For consistency and study replicability, I provide a detailed method used for data collection, sampling and sampling frame, procedure for data collection, and construct operationalization.

Research Design and Rationale

The study variables for this research included attitudes, perceptions, and the participants' socio-demographic characteristics: gender, age, educational attainment, profession, region, role support, and work motivation. For this study, the participants' socio-demographic characteristics were presumed not to predict the attitude and perception of MHPs' role although the designation of these variables might be somewhat arbitrary. Moreover, the socio-demographic characteristics are inherently not manipulated and were classified as the independent variable while the dependent variables were attitude and perception.

To realize the aims and objectives of this research, a cross-sectional survey was conducted. Surveys are used to obtain information from a sample of individuals about their behavior, knowledge, history, attitudes, or habits. The goal is to estimate the characteristics of the population of interest (Everitt, 1998). The aims and objectives of this research were further reformulated to research questions and hypotheses. Adding to the general body of knowledge was the sole intent of my study; therefore, I illustrated common features of a descriptive study, quantitative data collection, and findings generalizable to the target population.

Descriptive studies embrace research whose data are collected through a wide range of methods, including diaries, interviews, questionnaires, and observations (Sim & Wright, 2002). This type of research intends to present facts pertaining to the nature and status of a particular situation, as it exists at the time of study (Creswell, 2009). It is also concerned with relationships and practices that exist, processes and beliefs that are ongoing, or developing trends (Bowling, 1997). An important characteristic of this type

of study is that there is no manipulation of variables of interest, and it does not entertain any form of deliberate interference, intervention, or random allocation of study participants as data are collected in their natural state (Sim & Wright, 2002). The most desirable mode for data collection in my study was the survey method because it is aimed at collecting information on the attitudes, perception, and factors that influence MHPs' role in tackling substance abuse and related disorders in Nigeria. In addition, surveys are appropriate to address descriptive research questions (Sim & Wright, 2002).

The time point of data collection for this descriptive research was cross-sectional because this type is used to study a particular phenomenon, to describe variables (e.g., functional status, characteristics, attitudes or behavior) at a given period of time, or to compare across populations, multiple attributes (Creswell, 2009; Sim & Wright, 2002). Data collection for this study represents a snapshot in time.

Population, Sampling, and Sampling Procedures

The population of mental health workforce in Nigeria as compiled by the WHO and the Nigerian Ministry of Health reflected a ratio of 0.02 social workers and psychologists per 100,000 persons, 0.09 psychiatrists, and 4.0 psychiatric nurses per 100,000 (WHO, 2006). In view of the aforementioned statistics of MHPs, the inclusion criteria for the subjects in this study were MHPs working in hospitals dealing with individuals who present with substance abuse related disorders and licensed to practice within Nigeria. The group of MHPs surveyed included psychiatrists, addiction counselors, psychologists, psychiatric nurse, peer counselors, and social workers. However, interns and medicine counter assistants whose educational exposure in terms of dealing with individuals with substance abuse related disorders might not be sufficiently

detailed, and MHPs not licensed to practice in Nigeria were excluded from study, see Figure 2.

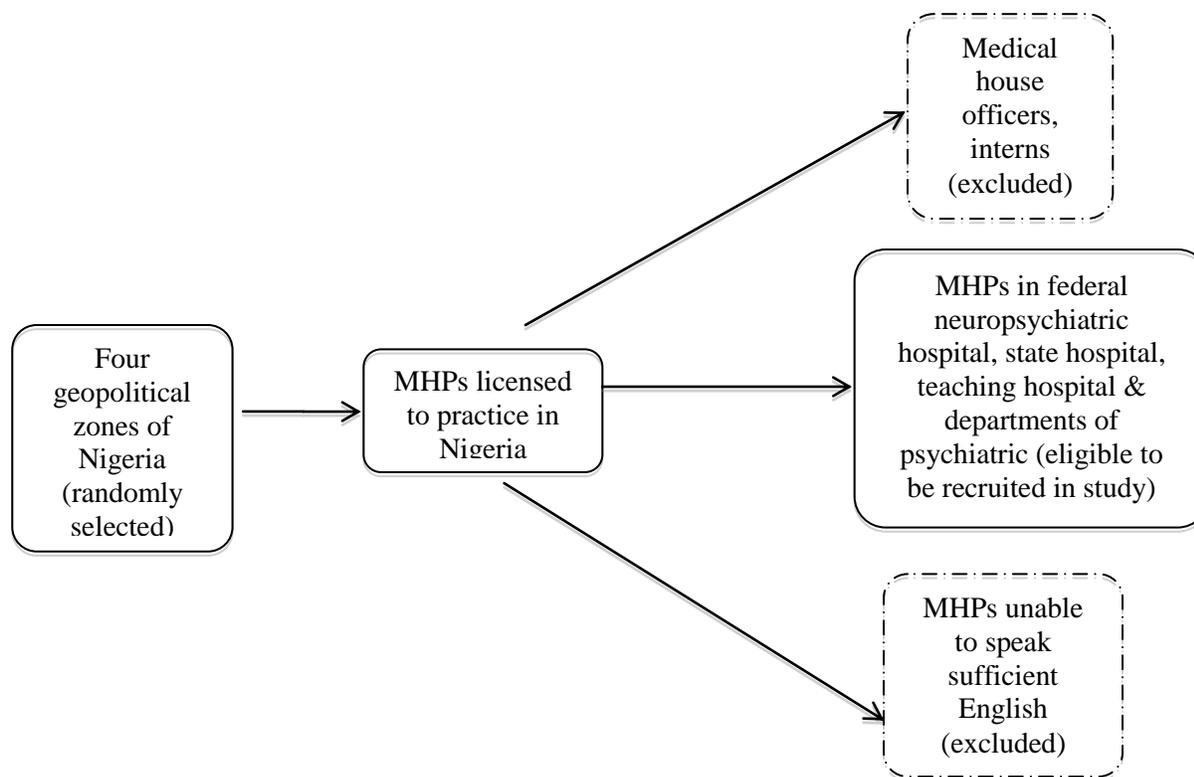


Figure 2. Flow chart of study participants indicating the inclusion and exclusion criteria for eligibility

Because the survey is interested in MHPs and substance abuse related disorders, it was appropriate to identify hospitals with reference to the treatment population. Hospitals surveyed included federal neuropsychiatric hospitals, state neuropsychiatric hospitals, and mental health departments in teaching hospitals. General hospitals, federal medical centers, and primary health centers that did not have dedicated departments to deal with mental health conditions were also excluded from the study. Because of the various statistics of arrests in the geopolitical zones of the country by the National Drug Law

Enforcement Agency, it was also important to survey hospitals located in the different regions of the country to establish the impact of region on attitude of MHPs dealing with individuals who presents with substance-abuse related disorders.

Sampling and Sampling Procedure

For the purpose of this research, only MHPs licensed to practice in Nigeria were recruited. Because this survey was interested in substance abuse and related disorders, it was appropriate to choose healthcare facilities with reference to the National Drug Law Enforcement Agencies (NDLEA) and established neuropsychiatric hospitals in Nigeria. Study participants were drawn from four geopolitical zones of the country (southwest and south-southern zones, northwest, and northeastern zones of the country). The states surveyed from each zone were selected through simple random sampling to have an unbiased representation of MHPs in the country. This form of sampling technique allowed study participants to have an equal and known chance of being selected (Frankfort-Nachmias & Nachmias, 2008; Sim & Wright, 2002).

The probability technique employed also helped to reduce bias in the pool of subjects available (Sim & Wright, 2002). Furthermore, it allowed characteristics of the accessible population to be reflected in the sample at the same level and proportions, and it helped to secure the external validity of the research (Frankfort-Nachmias & Nachmias, 2008). To select representative sample of MHPs from four geopolitical zones in the country, two zones were randomly selected from the northern and southern hemispheres of Nigeria; four geopolitical zones surveyed were obtained (northwest and northeastern zones, southwest and south-southern zones of the country). Three states per zone were randomly selected from all the 36 states of the country because there are at least six states

in all the zones. Hospitals selected per zone were federal neuropsychiatric hospitals, teaching hospitals, and state neuropsychiatric hospitals.

G* Power Analysis

In an attempt to detect a real effect and to further reduce attrition bias, I conducted a G*power analysis to ensure that the statistical analysis of this study is accepted with some level of confidence in the pool of available subjects (Trochim, 2006). To ensure that any observed difference in attitude and perception of MHPs was not only statistically significant but also meaningful, a medium effect size of 0.25 (Cohen's *d*) was used. Further, an alpha level of 0.05 was adopted to increase the likelihood of finding any statistical significance between attitudinal score, perception score, and the independent variables (Faul, Erdfelder, Buchner, & Lang, 2009). The required sample size was then computed a-priori using ANOVA fixed effects, special main effects, and interactions. A non-centrality parameter λ of 22.3125 and a critical *F* of 2.0355 were obtained, which gave rise to a total sample size of 357 with a four degree of freedom and an actual power of 0.95036 adopted in the study (see Figure 3 and Table 1). Going forward, 30 MHPs were surveyed per state to give a total of 90 MHPs per zone. A list of all MHPs employed within each region was obtained, and this list formed the sampling frame from which random samples of 360 individual MHPs were drawn.

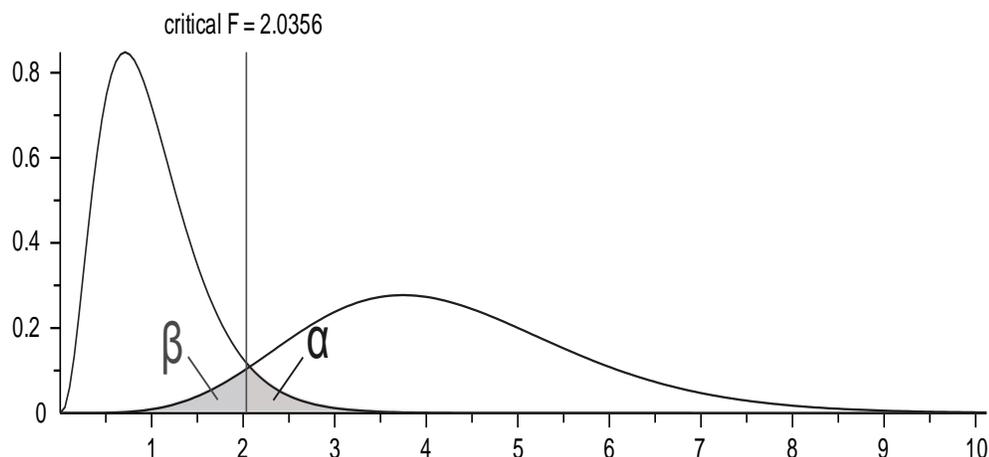


Figure 3. G* Power Analysis of required sample size computed a-priori for one-way ANOVA, fixed effects, special main effects and interactions

Table 1

Sample size calculated a-priori

Protocol of power analysis		
Input	Effect size f	= 0.25
	α err prob	= 0.05
	Power (1- β err prob)	= 0.95
	Numerator df	= 7
	Number of groups	= 4
Output	Non-centrality parameter λ	= 22.3125000
	Critical F	= 2.0356185
	Denominator df	= 352
	Total sample size	= 357
	Actual power	= 0.9503476

Note: F tests - ANOVA: Fixed effects special main effects and interactions
 Analysis: A priori: Compute required sample size

Procedures for Recruitment, Participation, and Data Collection

For the purpose of this research, a face-to-face administration of the survey was conducted. The geopolitical zones, states, and mental health treatment centers surveyed were selected through simple random sampling. Health professionals working in mental

health departments of university teaching hospitals, federal, and state neuropsychiatric hospitals in selected zones and states were then approached and invited to participate in the study. The purpose and intent of the study were explained to potential participants. In addition, flyers inviting potential respondents to participate in the research were presented. Informed consent was obtained from individuals willing to participate in the survey, signed by the study participants, and appropriately documented. The participants were fully informed of the method, purpose, and intended possible uses of the research prior to obtaining informed consent. Interested respondents who consented to participate in the study were then served with the questionnaire, which was filled out of office hours.

Demographic Information

Demographic information collected included the gender of respondents, age, educational attainment, region, and profession of respondents. The states and types of facilities surveyed were indicated on the demographic questionnaire. Information obtained from these demographic questionnaires was used for statistical purposes only.

Informed Consent

For the purpose of this research, study participants were informed fully on the method, purpose, and intended possible uses of the research prior to obtaining informed consent to participate in the study. This entailed providing as much information as possible to prospective participants before participating in the research (ESRC, 2010). Consents were obtained in a written form and signed by research participants. Furthermore, the participants were informed of their right to withdraw or refuse to participate from the research whenever they wanted, without the need to give any explanation. At no time was any form of coercion made to the research participants as

they were informed of their right to opt to be involved voluntarily in the research and their consent were freely obtained. Ethical issues concerning covert observation did not arise or conducted at any stage of the research.

Instrumentation and Operationalization of Constructs

The instruments adapted to establish MHPs' attitudes and perception of their role in tackling substance abuse and related disorders were the DDPPQ (Watson, Maclaren & Klerr, 2007) and the SAAS (Chapel et al., 1985). Permission to adapt the validated version of the DDPPQ to my study was granted by the copyright holders John Wiley & Sons in England (Personal communication, August 1, 2014). Permission to adapt the SAAS was granted by the Copyright Clearance Centers' RightsLink service through the licensed content publisher, alcohol research documentation, INC (Personal communication, Nov 17, 2014). In addition to these instruments, the demographic information of the participants served as the independent constructs of my study.

Drug and Drug Users' Problems Perception Questionnaire (DDPPQ)

Watson et al. (2007) explored the psychometric properties of the DDPPQ by assessing the content and construct validity of the questionnaire, its internal consistency, and its test-retest reliability. The DDPPQ was adapted from a previously developed questionnaire by Cartwright (1980) to measure therapeutic attitudes of social care staff and healthcare professionals, the alcohol and alcohol problems perception questionnaire (AAPPQ; Watson et al., 2007). Prior to testing the psychometric properties of the DDPPQ, the research committee of the National Health Service approved the study that comprised 1,073 participants (Watson et al., 2007).

The population surveyed comprised of 735 nursing staff, 80 clinical psychologist,

195 medical staff, and 63 occupational therapist recruited via a computer generated random numbers of each professional groups previously stratified by the researchers (Watson et al., 2007). The 22-item DDPPQ instrument has the internal consistency of an alpha coefficient of 0.87. Using Cronbach's alpha, some items on the AAPPQ (items 8, 17, and 25 of the AAPPQ) were deleted because it reflected a result that was non-dependent of the internal consistency of DDPPQ (Watson et al., 2007). Five components explained 68.40% of the variance. These components were extracted based on the results obtained from the principal component analysis of the DDPPQ conducted by the researchers Watson et al. (2007). The resulting components include the following:

- Role Adequacy: Seven items were extracted as component 1 with an alpha of 0.94.
- Role Support: Three items were extracted as component 2 with an alpha of 0.78.
- Job Satisfaction: Four items were extracted as component 3 with an alpha of 0.80.
- Role-Related Self Esteem: Four items were extracted as component 4 with an alpha of 0.69.
- Role Legitimacy: Two items were extracted as component 5 with an alpha of 0.89.

Regarding the construct validity of the DDPPQ, majority of the participants (89%) found the questionnaire easy to complete, 67% indicated that items were sufficient and needed no additional items, and 81% of the study participants felt the items on the questionnaire were relevant to them (Watson et al., 2007). Although a small number of the study participants indicated six items as value-laden and/or ambiguous, these items reflected dubious reliability by the statistical analysis and were deleted from the validated

version of the DDPPQ (Watson et al., 2007).

Given that the intra-class correlation and internal consistency of the validated DDPPQ were refined, items that did not contribute in any way to the construct validity and questions that reflected poor retest-test reliability were discarded (Watson et al., 2007). For the purpose of my study, the DDPPQ were expressed on a 4-point Likert scale ranging from 1 = *strongly agree* to 4 = *strongly disagree*. The 4-point scale, instead of 5-point, was employed in an effort to avoid neutral responses from study participants. The extensive testing of the psychometric properties of the DDPPQ reflected a reliable, valid, coherent, and concise instrument to assess therapeutic attitudes and perception of HCPs and social workers and was adapted for this study (Watson et al., 2007).

Substance Abuse Attitude Survey (SAAS)

Chapel et al. (1985) developed the SAAS to measure medical education attitudinal objectives toward drug misuse and alcohol. The item-pool questionnaire was refined after several factor analyses and multiple administration of the final scale. Five sub-factors were derived from the standardized SAAS filled by 324 non-criterion clinicians with no professional background in dealing with substance misuse clients and 116 criterion clinicians sufficiently experienced in substance misuse management (Chapel et al., 1985). The sub-factors include non-moralism, treatment optimism, non-stereotypes, treatment intervention, and permissiveness (Chapel et al., 1985). After repeated administration of the questionnaire, the researchers established the internal consistency of the factor structure (Chapel et al., 1985). The internal validity of the questionnaire was confirmed via the scores obtained from the 116 criterion clinicians knowledgeable in dealing with individuals who misuse drugs and alcohol (Chapel et al.,

1985). In addition to the scores obtained from the criterion clinicians, a significantly higher score was established on factors related to treatment optimism and treatment intervention compared to the non-criterion clinicians ($p < 0.001$). There are five identified factors:

- Items classified as permissiveness (Factor 1), reflected an alpha reliability coefficient for criterion group (α coefficients = 0.73), for non-criterion group (α coefficients = 0.77) explaining 50.5% of variance and an Eigenvalue of 7.1 (Chapel et al., 1985).
- Items classified as treatment intervention (Factor 2), reflected an alpha reliability coefficient for criterion group (α coefficients = 0.56), for non-criterion group (α coefficients = 0.63) explaining 23.6% of variance and an Eigenvalue of 3.3 (Chapel et al., 1985).
- Items classified as non-stereotypes (Factor 3), reflected an alpha reliability coefficient for criterion group (α coefficients = 0.76), for non-criterion group (α coefficients = 0.81) explaining 10.5% of variance and an Eigenvalue of 1.5.
- Items classified as treatment optimism (Factor 4), reflected an alpha reliability coefficient for criterion group (α coefficients = 0.64), for non-criterion group (α coefficients = 0.67) explaining 8.2% of variance and an Eigenvalue of 1.2.
- Items classified as non-moralism (Factor 5), reflected an alpha reliability coefficient for criterion group (α coefficients = 0.63), for non-criterion group (α coefficients = 0.67) explaining 7.0% of variance and an Eigenvalue of 1.0 (Chapel et al., 1985).

The researchers further reiterated the importance of SAAS in achieving attitudinal

changes and in modifying substance dependence teaching approaches for both continuing medical education and undergraduate programs (Chapel et al., 1985).

To allow for modification of wordings, for possible detection of ambiguity, and to identify wordings that might be too sensitive for the Nigerian culture, I conducted preliminary testing of the SAAS with 10 MHPs practicing in one of the zones that was excluded from the study (north central zone of the country). For the non-moralism subscale, the statement *clergymen should not drink in public* (Chapel et al., 1985) was considered unidirectional and was removed from the questionnaire because the expected role and conduct of clergymen in the Nigerian society was to abstain both privately and publicly from substance use. Because heroine and cannabis are considered illegal under the Nigerian law and attract the same punishment for trafficking and use, the statement classified under the subscale of non-moralism the statement, *the laws governing the use of heroine should be the same* (Chapel et al., 1985), was removed from the questionnaire. The statements *tobacco smoking should be allowed in high school* and *cannabis use can be healthy experimentation* under the subscale of permissiveness (Chapel et al., 1985) were also removed from the questionnaire because they were considered too sensitive in the Nigerian culture. For the subscale of non-stereotypes, *the statement chronic substance dependent people who refuse treatment should be legally committed to long term care* (Chapel et al., 1985), was removed from the questionnaire because of the absence of any law that legally commits an individual to any form of substance dependent treatment in the country.

The preliminary testing of the questionnaire also revealed that the term *hippy style clothing* was not a commonly used term in the country. Almost all the MHPs (80%) did

not respond to the questionnaire when it was pilot tested. Therefore, the statement *people who dress in hippy style clothing probably use psychedelic drug* under the subscale of non-stereotype was removed from the questionnaire (Chapel et al., 1985). Because this study was focused primarily on illicit drug use and not alcohol, questions from the SAAS were modified with permission from the copyright holders to reflect attitudes toward illicit drug use. Items that reflected both *alcoholism or drug addiction*, were made to read *drug addiction*. These includes factor 2, treatment intervention subscale (items 8, 9, 10, 13) and factor 4, treatment optimism subscale (items 23, 24, 25). Items from factor 1, permissiveness subscale reflecting only *use of alcohol* were made to read *drug use* (items 5 & 7). The SAAS was modified to a 31-item as a composite scale and was adopted for my study (see Appendix C).

Data Analysis Plan

Data from the returned questionnaire were inputted into the IBM Statistical Package for the Social Sciences (SPSS) Statistics 21 after coding the variables accordingly. Data were checked for discrepancies. Descriptive statistics, consisting of numerical and graphical techniques for data summarization, were performed and used to analyze frequency of data distributions on numerical and categorical variables (socio-demographic variables). Chi-square tests were performed between the dependent variables ‘attitude in two categories’ (negative and positive attitude) and ‘perception in two categories’ (positive and negative perception). The independent variables (socio-demographic variables) identified differences in distributions of the dependent variables in two categories. One-way ANOVA or Kruskal-Wallis test (where assumptions of ANOVA was violated) were used to assess whether the mean score in the attitude and

perception of MHPs toward tackling illicit drug use was different across the values of discrete variables with more than two categories. Multiple logistic regressions were conducted to identify significant predictors of role perception exhibited by the respondents after the scores from the DDPPQ were dichotomized. Results were considered significant if the *p*-values were smaller than 0.05 at reliability estimate of 95% confidence interval.

Ethics Procedure

Ethics approval for this study was obtained from Walden University Institutional Review Board (Approval No. 01-12-15-0289231) and the National Health Research Ethics Committee of Nigeria (NHREC) Approval No. NHREC/01/01/2007-30/11/2014b). Guidelines from the Walden University Institutional Review Board and NHREC were strictly followed in my study. Prior to administering the questionnaire adapted for my study, participants reviewed the informed consent, which described the study and its objectives. The consent offered confirmation that the study was voluntary, a clear statement about opting out of study, and statements that affirmed participants' confidentiality and anonymity. Participants signed it to reflect their complete understanding of the study and willingness to participate. The confidentiality and anonymity of participants were respected in the following ways:

- Data obtained were processed only via the means of software, IBM SPSS statistics 21.
- Hard copies of the questionnaire were processed as part of a relevant filing system and stored in a locked cabinet.
- The obtained data will be kept for five years and then destroyed.

- The demographic questionnaire adapted for this study did not have any form of identifier or information that could jeopardize the participants in any way.

Summary

This cross-sectional quantitative study was aimed at adding to the general body of knowledge, MHPs' attitude, and perception of their role in tackling substance abuse and related disorders. Of further interest was the impact of regional variation on the attitudes of MHPs. In addition, I assessed if gender, age, profession, educational attainment, work motivation, and role support could significantly predict MHPs' perception of their role. To accomplish this, I used the validated versions of the DDPPQ and SAAS. The survey was conducted in neuropsychiatric hospitals and mental health departments of teaching hospitals located in four geopolitical zones of Nigeria. Data from returned questionnaire were analyzed via the IBM statistical package for the social sciences (SPSS) statistics 21. Ethics approval for this study was obtained from Walden University Institutional Review Board and NHREC. In Chapter 4, the data obtained in the study are concisely reported.

Chapter 4: Results

Introduction

The purpose of this study was to assess multidisciplinary MHPs' attitudes about the use and abuse of substances and to assess how they perceived their role in tackling substance abuse and related disorders in Nigeria. The study also sought to identify predictors of perception and to explore possible regional variations in attitude toward the five subscale factors of SAAS: permissiveness, treatment intervention, non-stereotypes, treatment optimism, and non-moralism. In this study, I hypothesized that MHPs would hold constructive attitude toward substance abuse and addiction in Nigeria but would lack distinctly defined perception of their role when dealing with drug-using populations. I also hypothesized that the socio-demographic characteristics of these professionals would not predict their perception. Because access to and use of healthcare services in Nigeria are influenced by regional variations that may impact the quality of healthcare delivery, it was hypothesized that there would be regional variations in the attitude of MHPs toward clients who present with substance abuse related disorders.

In this chapter, I describe the period for data collection, the response rates, and the total recruitment. A baseline demographic characteristic is reported using numerical and graphical techniques to summarize data. A chi-square test and a one-way ANOVA were performed using IBM SPSS Statistics 21 to identify differences in distribution and mean score between the dependent variables (attitudes and perception in two categories) and the independent variables (socio-demographic characteristics of study population). Furthermore, I conducted binary logistic regression to identify predictors of attitudes and perception displayed by the participants. Results were considered significant if the p -

values were smaller than 0.05. At the end of this chapter, I summarized the answers to the research questions and provided a detailed description of the findings.

Data Collection

MHPs licensed to practice within Nigeria were randomly recruited from four geopolitical zones of the country. The participants were from the psychiatry departments of university teaching hospitals and from federal and state neuropsychiatric hospitals within the selected zones. For this study, 292 MHPs responded to the survey for a response rate of 81.1% ($n = 292$). However, when evaluating the responses for outliers and missing cases and to ensure the surveys were completed accurately, five surveys were removed. Another survey was removed when, after conducting residual diagnostics to validate the model fit, it was taken to be a univariate outlier (extreme case). Thus, the responses from 286 participants were used for final data analysis. The data collection process was carried out as proposed in Chapter 3; there were no discrepancies in the outlined procedure.

Baseline Demographic Characteristics of the Study Population

Just over half (51.7% [$n = 148$]) of the MHPs who responded to the survey were male. The majority (63.3% [$n = 181$]) were aged between 21 and 40 years. More than 80% ($n = 235$) of the respondents had undergraduate degree, and 13.3% ($n = 38$) and 4.5% ($n = 13$) had obtained either a master's degree or PhD at the time of the survey. Majority of the participants (70.6% [$n = 202$]) had practiced for less than 16 years. Just over half 58% ($n = 166$) of the 286 MHPs included for final data analysis were psychiatric nurses, 7% ($n = 20$) were psychologists, 18.9% ($n = 54$) were social workers, 2.1% ($n = 6$) were addiction counselors, 1.4% ($n = 4$) were peer counselors, and 12.6% ($n = 36$) were other mental health professionals.

= 36) were psychiatrists. Of the useable questionnaire, 31.5% (n = 90) were obtained from the northwestern region, 20.6% (n = 59) were filled by MHPs from the northeastern region. Approximately 28% (n = 81) and 19.6% (n = 56) were from the south-south and southwestern region of the country respectively. Frequency of distribution and demographics percentages are presented in Table 2.

Table 2

Frequencies and percentages for respondents' demographics by profession

Variables	Psychiatrist (n=36)	%	Nurse %(n=166)	Addiction counselor % (n=6)	Social worker %(n=54)	Psychologist % (n=20)	Peer counselor % (n=4)	Total %(n=286)
Region								
Northeast (NE)	19.4		38.6	0.0	20.4	10.0	25.0	31.5
Northwest (NW)	47.2		17.5	33.3	9.3	30.0	0.0	20.6
South-South (SS)	19.4		27.7	16.7	31.5	45.0	25.0	28.3
Southwest (SW)	13.9		16.3	50.0	20.4	15.0	50.0	19.6
Age group								
21- 25	0.0		15.7	0.0	5.6	5.0	0.0	10.5
26-30	30.6		19.3	33.3	20.4	25.0	25.0	21.7
31-35	16.7		12.7	16.7	25.9	35.0	50.0	17.8
36-40	22.2		9.0	16.7	18.5	20.0	0.0	13.3
41-45	19.4		14.5	0.0	11.1	10.0	25.0	14.0
>45	11.1		28.9	33.3	18.5	5.0	0.0	22.7

(Table continues)

Frequencies and percentages for respondents' demographics by profession

Variables	Psychiatrist (n =36)	%	Nurse %(n=166)	Addiction counselor % (n = 6)	Social worker %(n=54)	Psychologist % (n = 20)	Peer counselor % (n = 4)	Total %(n=286)
Educational attainment								
1 st Degree	58.3		91.0	83.3	85.2	45.0	75.0	82.2
Masters	11.1		8.4	16.7	13.0	55.0	25.0	13.3
PhD	30.6		0.6	0.0	1.9	0.0	0.0	4.5
Gender								
Male	22.2		58.4	50.0	40.7	30.0	50.0	48.3
Female	77.8		41.6	50.0	59.3	70.0	50.0	51.7
Years of practice								
>5	27.8		29.5	33.3	37.0	50.0	0.0	31.8
5-10	41.7		20.5	0.3	24.1	25.0	75.0	24.5
11-15	22.2		12.0	50.0	9.3	20.0	25.0	14.3
16-20	5.6		9.6	0.0	13.0	5.0	0.0	9.1
>20	2.8		28.3	16.7	16.7	0.0	0.0	20.3

Research Questions 1, 2, 3, and 4

Research Question 1: What types of attitude do MHPs hold regarding the use and abuse of substances in Nigeria?

The attitudes of multidisciplinary MHPs were assessed using the substance abuse attitude survey (SAAS) developed by Chapel et al. (1985). The validated SAAS adopted in this study consisted of 31 questions and responses, which were based on a four-point Likert scale to avoid neutral responses (see Appendix C). All questions were associated with five-attitudinal subscale factors. These included (a) permissiveness, (b) treatment intervention, (c) non-stereotypes, (d) treatment optimism, and (e) non-moralism (see Table 3).

Table 3

Subgroup of Attitudes Identified by the SAAS

Permissiveness	Individual acceptance that the use of substances is a continuum of typical human behavior. The subgroup consists of 7 questions (Q1-Q7).
Treatment Intervention	Implies the consistent and precise conceptualization of the extent to which substance abuse treatment is received, delivered, and used as intended. The subgroup consists of 6 questions (Q8 - Q13)
Non-stereotypes	Describes the extent to which MHPs display lack of fixed or over generalized belief toward individuals who abuse substances. The subgroup consists of 8 questions (Q14 - Q21)
Treatment Optimism	Participants' display of positivity toward the successful outcome of drug dependence care and treatment. The subgroup consists of 4 questions (Q22 - Q25)
Non-moralism	Displays the degree to which the respondents are not being judgmental about a particular principle of conduct or system of values that defines the extent to which the use of substances is deemed wrong or right. The subgroup consists of 6 questions (Q26 - Q31).

To establish attitudes of MHPs in two categories (as binary variables), the Likert scale was condensed into a dichotomous response. Thus, the *strongly disagree* category was incorporated into the *disagree* category. The *strongly agree* category was incorporated into the *agree* category. In addition, the attitude of mental health professional was measured in a continuum with the theoretical assumption that MHPs with positive attitude scored higher than did those with negative attitudes who scored lower.

For this study, 286 participants took the SAAS. For the subscale of permissiveness, the seven questions included the following items: (a) “marijuana should be legalized” (LEGALIZED), (b) “personal use of drugs should be legal in the confines of one’s own home” (CONFINES), (c) “daily use of one marijuana cigarette is not necessarily harmful” (DUMCH), (d) “it can be normal for a teenager to experiment with drugs” (NORMAL), (e) “Lifelong abstinence is a necessary goal in the treatment of problematic drug use” (ABSTINENCE), (f) “once a person becomes drug-free through treatment he can never become a social user” (FREE), and (g) “parents should teach their children how to use drugs” (TEACH). Participants’ responses to the SAAS are presented in Table 4.

Table 4

Permissiveness subgroup: Frequency of Responses, Means, Standard Deviations, and Variance for Scores on the Attitude Subgroup

Questions	Agree		Disagree		<i>M</i>	<i>SD</i>	Min	Max	Variance
	n	%	n	%					
LEGALIZED	18	6.3	268	93.7	1.94	0.243	0	1	0.059
CONFINES	31	10.8	255	89.2	1.89	0.311	0	1	0.097
DUMCH	26	9.1	260	90.0	1.91	0.288	0	1	0.083
NORMAL	62	21.7	224	78.3	1.78	0.413	0	1	0.170
ABSTINENCE	239	83.6	47	16.4	1.16	0.371	0	1	0.138
FREE	74	25.9	212	74.1	1.74	0.439	0	1	0.192
TEACH	101	35.3	185	64.7	1.65	0.479	0	1	0.229

Almost all the study participants 93.7% ($n = 268$, $M = 1.94$, $SD = 0.243$) disagreed or strongly disagreed that marijuana should be legalized. In addition, 89.2% ($n = 255$, $M = 1.89$, $SD = 0.311$) were of the opinion that personal use of drugs should not be legal even in the confines of the homes of individuals who use substances. A high percentage 90% ($n = 260$, $M = 1.91$, $SD = 0.288$) believed that daily use of marijuana cigarette was harmful, and 78.3% ($n = 224$, $M = 1.78$, $SD = 0.413$) expressed that it is not normal for a teenager to experiment with drugs. Majority of the MHPs who responded to the survey 83.6% ($n = 239$, $M = 1.16$, $SD = 0.371$) believed that lifelong abstinence was an essential goal in treating individuals with problematic drug use. More than 70% ($n = 212$, $M = 1.74$, $SD = 0.439$) of the participants were of the opinion that an individual could still live a normal life and become a social user once he or she became drug free. A

majority, 64.7% ($n = 185$, $M = 1.65$, $SD = 0.479$), expressed disagreement that parents should teach their children how to use drugs (see Table 5).

For the subscale of treatment optimism, the display of positivity by MHPs toward the successful outcome of drug dependent care and treatment was assessed using 4-item questionnaire. The questions included the following items: (a) “drug addiction is a treatable illness” (TREATABLE), (b) “a drug-dependent person who has relapsed several times probably cannot be treated” (RELAPSED), (c) “most drug-dependent persons are unpleasant to work with” (UNPLEASANT), (d) “a drug-dependent persons cannot be helped until he/she has hit rock bottom” (ROCKBOTTOM). Almost all the study participants, 92.7% ($n = 265$, $M = 1.07$, $SD = 0.261$), believed drug addiction is treatable. A majority, 69.2% ($n = 198$, $M = 1.69$, $SD = 0.462$), expressed the opinion that drug-dependent individuals who have relapsed severally can still be treated. Although a substantial number of the MHPs who responded to the survey 72% ($n = 206$, $M = 1.28$, $SD = 0.450$) believed drug-dependent persons could be helped, they were also of the opinion that most drug-dependent individuals were not pleasant to work with (Table 5).

Table 5

Treatment optimism subgroup: frequency of responses, means, standard deviations, and variance for the attitude subgroup

Questions	Agree		Disagree		M	SD	Min	Max	Variance
	n	%	n	%					
TREATABLE	265	92.7	21	7.3	1.07	0.261	0	1	0.068
RELAPSED	88	30.8	198	69.2	1.69	0.462	0	1	0.214
UNPLEASANT	206	72.0	80	28.0	1.28	0.450	0	1	0.202
ROCKBOTTOM	80	28.0	206	72.0	1.72	0.450	0	1	0.202

For the subscale of treatment intervention, the extent to which substance abuse treatment is received, delivered, and used as intended by participants was evaluated using 6-item questions. The questions included the following items: (a) “family involvement is a very important part of the treatment of drug addiction” (FAMILY), (b) “the best way to treat drug-dependent people is to refer them to a good treatment program” (TREATPROG), (c) “group therapy is very important in the treatment of drug addiction” (GROUPTHERA), (d) “urine drug screening can be an important part of treatment of drug misuse” (SCREENING), (e) “Long-term outpatient treatment is necessary for the treatment of drug addiction” (LONG-TERM), and (f) “paraprofessional counselors can provide effective treatment for drug misusers” (PARAPROF).

Almost all the respondents, 97.9% ($n = 280$, $M = 1.02$, $SD = 0.144$), either agreed or strongly agreed that family involvement should be an integral part of the treatment for individuals who misuse substances or who present with substance abuse related disorders. Substantial number of the MHPs who responded to the survey, 97.6% ($n = 279$, $M = 1.02$, $SD = 0.155$), believed that the best way to treat drug-using populations was to refer them to a good treatment program. High percentages, 94.4% ($n = 270$, $M = 1.06$, $SD = 0.230$) and 82.5% ($n = 236$, $M = 1.15$, $SD = 0.355$), believed group therapy and long-term outpatient treatment were essential for the treatment of drug addiction respectively. Screening for drugs in the urine of drug misusers was expressed by a majority of the study participants, 85.3% ($n = 244$, $M = 1.17$, $SD = 0.380$), as an important part of treatment. Approximately 75% ($n = 217$, $M = 1.24$, $SD = 0.429$) of the participants were of the opinion that paraprofessional counselors can provide effective treatment for drug misusers (see Table 6).

Table 6

Treatment Intervention subgroup: frequency of responses, means, standard deviations, and variance for the attitude subgroup

Questions	Agree		Disagree		<i>M</i>	<i>SD</i>	Min	Max	Variance
	n	%	n	%					
FAMILY	280	97.9	6	2.1	1.02	0.144	0	1	0.021
TREATPROG	279	97.6	7	2.4	1.02	0.155	0	1	0.024
GROUPTHERA	270	94.4	16	5.6	1.06	0.230	0	1	0.053
SCREENING	244	85.3	42	14.7	1.15	0.350	0	1	0.126
LONG-TERM	236	82.5	50	17.5	1.17	0.380	0	1	0.145
PARAPROF	217	75.9	69	24.1	1.24	0.429	0	1	0.184

For the subscale of non-stereotypes, the degree to which MHPs are not judgmental or do not maintain a particular principle of conduct toward individuals who misuse substances were assessed using 8-item questions. The questions included the following items: (a) “people who use marijuana usually do not respect authority” (RESPECT), (b) “smoking leads to marijuana use, which, in turn, leads to hard drugs” (SLMUHD), (c) “marijuana use leads to mental illness” (MENTAL), (d) “heroin is so addicting that no one can really recover once he/she becomes an addict” (ADDICTING), (e) “heroin use leads to addiction” (HULTA), (f) “weekend users of drugs will progress to drug misuse” (PROGRESS), (g) “a hospital is the best place to treat a drug addict” (HOSPITAL), and (h) “recreational drug use precedes drug misuse” (RECREATIONAL).

A high percentage of the MHPs who responded to the survey, 81.8% ($n = 234$, $M = 1.18$, $SD = 0.386$) and 86% ($n = 246$, $M = 1.14$, $SD = 0.347$), either agreed or strongly agreed that people who use marijuana do not usually respect authority. These participants were also of the opinion that people who smoke will use marijuana, which will lead to the use of hard drugs. Almost all the respondents, 95.8% ($n = 274$, $M = 1.04$, $SD = 0.201$), believed that the use of marijuana would lead to mental illness, and that recreational drug use normally precedes drug misuse 87.1% ($n = 249$, $M = 1.21$, $SD = 0.405$). Although a majority, 79.4% ($n = 227$, $M = 1.13$, $SD = 0.336$), agreed or strongly agreed that the use of heroin leads to addiction, less than half, 49% ($n = 145$, $M = 1.51$, $SD = 0.501$), were of the opinion that heroin was so addicting that individuals who become an addict cannot really recover. When asked to indicate their level of agreement to the question that people who use substances only on weekends will progress to drug misuse, 88.5% ($n = 253$, $M = 1.12$, $SD = 0.320$) either agreed or strongly agreed in affirmative. In addition to these expressed opinions, 70% ($n = 199$, $M = 1.30$, $SD = 0.461$) believed that the best place to treat drug addicts was the hospital (see Table 7).

For the subscale of non-moralism, MHPs' system of values that defines the extent to which the use of substances is deemed wrong or right were assessed using 6-item questions. The questions included the following items: (a) "street pushers are the initial source of drugs for young people" (PUSHERS), (b) "drug misuse is so dangerous that it could destroy the youth of our country if not controlled by law" (DESTROY), (c) "angry confrontation is necessary in the treatment of drug addicts" (CONFRONTATION), (d) "drug misuse should only be treated by specialists in the field" (DMTSIF), (e) "addiction

to drug is associated with a weak will” (WEAKWILL), and (f) “using any hard drugs shortens one’s life span” (SHORTENS).

Table 7

Non-stereotypes subgroup: Frequency of responses, means, standard deviations, and variance for the attitude subgroup

Questions	Agree		Disagree		<i>M</i>	<i>SD</i>	Min	Max	Variance
	n	%	n	%					
RESPECT	234	81.8	52	18.2	1.18	0.386	0	1	0.149
SLMUHD	246	86.0	40	14.0	1.14	0.347	0	1	0.121
MENTAL	274	95.8	12	4.2	1.04	0.201	0	1	0.040
ADDICTING	141	49.3	145	50.7	1.51	0.501	0	1	0.251
HULTA	227	79.4	59	20.6	1.21	0.405	0	1	0.164
PROGRESS	253	88.5	33	11.5	1.12	0.320	0	1	0.102
HOSPITAL	199	69.6	87	30.4	1.30	0.461	0	1	0.212
RECREATE	249	87.1	37	12.9	1.13	0.336	0	1	0.113

Almost all the participants, 97.2% ($n = 278$, $M = 1.03$, $SD = 0.165$), believe the use of drugs needs to be controlled by law because it could destroy the youth of our country. Approximately 80% ($n = 228$, $M = 1.20$, $SD = 0.403$) pointed to the fact that initial source of drugs for young people were street pushers. Although majority, 73.1% ($n = 209$, $M = 1.73$, $SD = 0.444$), of the study participants either agreed or strongly agreed that angry confrontation was unnecessary when treating individuals who misuse substances, only 21% ($n = 60$, $M = 1.21$, $SD = 0.408$) did not associate drug addiction to weak will. More than 80% of the MHPs ($n = 238$, $M = 1.17$, $SD = 0.374$) expressed that

specialists in the field of drug misuse and related disorders should treat drug misusers. A substantial number, 93.4% ($n = 267$, $M = 1.07$, $SD = 0.249$), believed using any drugs shortens the life span of its users (see Table 8).

Table 8

Non-moralism subgroup: Frequency of responses, means, standard deviations, and variance for the attitude subgroup

Questions	Agree		Disagree		M	SD	Min	Max	Variance
	n	%	n	%					
PUSHERS	228	79.7	58	20.3	1.20	0.403	0	1	0.162
DESTROY	278	97.2	8	2.8	1.03	0.165	0	1	0.027
CONFRONT	77	26.9	209	73.1	1.73	0.444	0	1	0.197
DMTSIF	238	83.2	48	16.8	1.17	0.374	0	1	0.140
WEAKWILL	226	79.0	60	21.0	1.21	0.408	0	1	0.166
SHORTENS	267	93.4	19	6.6	1.07	0.249	0	1	0.062

Research Question 2: *What are MHPs perception of their role in tackling substance abuse and related disorders in Nigeria?*

The perception of MHPs toward tackling substance abuse and related disorders were assessed using the DDPPQ developed by Watson et al. (2007). The 22-item DDPPQ adopted in this study was scaled psychometrically using a four point Likert scale to avoid neutral responses (see Appendix B). All questions were associated with six subscale factors (see Table 9).

Table 9

Subgroup of Perception Identified by the DDPPQ

Role adequacy	MHPs' notion of being well informed and enlightened in handling substance abuse related disorders. The subgroup consists of 7 questions (Q1- Q7, Q19).
Role legitimacy	MHPs' confidence of the prerogative right to handle substance abuse related disorders. The subgroup consists of 3 questions (Q8, Q9, Q10).
Role support	MHPs' ability to withstand or sustain any form of pressure that could be related to handling individuals who misuse substances based on perceived support of their role. The subgroup consists of 3 questions (Q11, Q12, Q13)
Motivation	The cognitive, emotional, social, and biological forces that activates goal-oriented behaviors exhibited by MHPs. The subgroup consists of 1 question (Q15)
Work satisfaction	Interplay of MHPs' negative or positive feelings, contentment (or lack of it) toward handling individuals who presents with substance abuse related disorders. The subgroup consists of 4 questions (Q14, Q20-Q22)
Role specific self-esteem	MHPs' self-worth of role attributes and abilities toward handling drug-using populations. The subgroup consists of 3 questions (Q16 -Q18)

To establish MHPs' perception of their role in two categories (as binary variables), the Likert scale was condensed into a dichotomous response. Thus the *strongly agree* was incorporated into the *agree* category, and the *strongly disagree* was incorporated into the *disagree* category. In addition, the perception of MHPs was measured in a continuum with the theoretical assumption that MHPs with positive perception scored lower while those with negative perception scored higher. A total of 286 study participants took the DDPPQ.

For the subscale of role adequacy, MHPs' notion of being well informed and enlightened in dealing with substance abuse related disorders were assessed using 8-item questions on the DDPPQ. The questions included the following items: (a) "I feel I have enough working knowledge of drugs and drug related problems" (WORKNOW), (b) "I feel I know enough about the causes of drug problems to carry out my role when working with drug users" (MYROLE), (c) "I feel I know enough about the physical effects of drug use to carry out my role when working with drug users" (PHYSICAL), (d) "I feel I know enough about the psychological effects of drugs to carry out my role when working with drug users" (PSYCHOLOGICAL), (e) "I feel I know enough about the factors which put people at risk of developing drug problems to carry out my role when working with drug users" (FACTORS), (f) "I feel I know how to counsel drug users over the long term" (COUNSEL), (g) "I feel I can appropriately advise my patients/clients about drugs and their effects" (ADVISE), and (h) "on the whole, I am satisfied with the way I work with drug users" (SATISFIED).

An equal number of respondents, 96.5% ($n = 276$, $M_1 = 1.70$, $M_2 = 1.72$, $SD_1 = 0.55$, $SD_2 = 0.584$), expressed that they had working knowledge of drugs and its related problems. They also expressed that they knew enough about the causes of problems related to drug use to carry out their role sufficiently toward individuals who presented with drug use problems. Almost all the respondents, 99.3% ($n = 284$, $M = 1.52$, $SD = 0.514$), believed they could appropriately advice clients/patients about drugs and the related problems. A majority of the MHPs who responded to the survey, 96.2% ($n = 275$, $M_1 = 1.72$, $M_2 = 1.71$, $SD_1 = 0.543$, $SD_2 = 0.572$), believed they knew enough about both psychological and physical effects of drug use to enable them appropriately to carry out

their role when working with clients that misuse substances. A few of the participants, 18.1% ($n = 52$, $M = 2.04$, $SD = 0.625$), expressed dissatisfaction with the way they worked with drug users. Just 5.6% ($n = 16$, $M = 1.74$, $SD = 0.554$) of the study participants expressed that they did not know how to counsel clients/patients who were drug users over the long term (see Table 10).

Table 10

Role adequacy subgroup: frequency of response in percentages, means, standard deviations, and variance for the perception subgroup

Questions	Strongly Agree %	Agree %	Disagree %	Strongly disagree %	<i>M</i>	<i>SD</i>	Variance
WORKNOW	32.9	63.6	1.7	1.7	1.72	0.584	0.341
MYROLE	33.9	62.6	2.8	0.7	1.70	0.555	0.308
PHYSICAL	32.5	63.6	3.5	0.3	1.72	0.543	0.295
PSYCHOLOGICAL	34.3	61.9	2.8	1.0	1.71	0.572	0.327
FACTORS	31.5	63.3	4.9	0.3	1.74	0.558	0.312
COUNSEL	31.8	62.6	5.6	0.0	1.74	0.554	0.306
ADVISE	48.3	51.0	0.7	0.0	1.52	0.514	0.264
SATISFIED	15.7	66.1	16.4	1.7	2.04	0.625	0.391

For the subscale of role legitimacy, MHPs' confidence of their prerogative right to handle substance abuse related disorders were assessed using 3-item questions on the DDPPQ. The questions included the following items: (a) "I feel I have the right to ask patients/clients questions about their drug use when necessary" (RIGHTQUESTION), (b) "I feel that my patients/clients believe I have the right to ask them questions about drug

use when necessary” (RIGHTTOASK), and (c) “I feel I have the right to ask a patient for any information that is relevant to their drug problems” (RIGHTTOINFO).

A majority of the MHPs who responded to the survey, 96.5% ($n = 276$, $M = 1.65$, $SD = 0.572$) and 95.8% ($n = 274$, $M = 1.69$, $SD = 0.547$), felt they had the right to ask about clients’ drug use when necessary and to ask for any information relevant to drug use problems respectively. However, a few of the respondents, 12.9% ($n = 37$, $M = 1.89$, $SD = 0.634$), felt their clients/patients believed they had the prerogative right to ask drug use related questions when necessary (Table 11).

Table 11

Role legitimacy subgroup: Frequency of responses, Means, Standard Deviations, and Variance for perception subgroup

Questions	Strongly Agree %	Agree %	Disagree %	Strongly disagree %	<i>M</i>	<i>SD</i>	Variance
RIGHTQUESTION	39.5	57.0	2.8	0.7	1.65	0.572	0.327
RIGHTTOASK	25.2	61.9	11.9	1.0	1.89	0.634	0.401
RIGHTINFORM	35.3	60.5	4.2	0	1.69	0.547	0.299

For the subscale of motivations, the cognitive, emotional, social, and biological forces that activate goal-oriented behaviors exhibited by MHPs were assessed using just one item on the DDPPQ, “I feel I that there is little I can do to help drug users” (LITTLE). More than half of the respondents, 60.9% ($n = 174$, $M = 2.73$, $SD = 0.886$), felt they could do more to help drug users (see Table 12).

Table 12

Motivation subgroup: frequency of responses, means, standard deviations, and variance for scores on perception subgroup

Questions	Strongly Agree %	Agree %	Disagree %	Strongly disagree %	<i>M</i>	<i>SD</i>	Variance
LITTLE	8.4	30.8	39.9	21.0	2.73	0.886	0.785

For the subscale of role support, MHPs' ability to withstand or sustain any form of pressure that could be related to handling individuals who misuse substances based on perceived support of their role was assessed using 3-item questions of the DDPPQ. The questions included the following items: (a) "If I felt the need when working with drug users I could easily find someone with whom I could discuss any personal difficulties that I might encounter" (EASILYFIND), (b) "If I felt the need when working with drug users I could easily find someone who would help me clarify my professional responsibilities" (CLARIFY), and (c) "If I felt the need I could easily find someone who would be able to help me formulate the best approach to a drug user" (FORMULATE).

A substantial number of the participants, 77.6% ($n = 222$, $M = 2.11$, $SD = 0.685$), expressed that they could easily find someone to discuss personal difficulties encountered when dealing with drug using populations, and 75.2% ($n = 215$, $M = 2.14$, $SD = 0.731$) expressed support in the area of clarifying professional responsibilities. In addition, approximately 80% of the study participants ($n = 226$, $M = 2.08$, $SD = 0.681$) expressed support in formulating best approach to handle different drug-related presentations (see Table 13).

Table 13

Role support subgroup: frequency of responses, means, standard deviations, and variance for perception subgroup

Questions	Strongly Agree %	Agree %	Disagree %	Strongly disagree %	<i>M</i>	<i>SD</i>	Variance
EASILYFIND	15.0	62.6	18.9	3.5	2.11	0.685	0.469
CLARIFY	15.7	59.4	19.9	4.9	2.14	0.731	0.535
FORMULATE	16.4	62.6	17.8	3.1	2.08	0.681	0.464

For the subscale of role specific self-esteem, MHPs' self-worth of role attributes and abilities toward dealing with drug-using populations was assessed using 3-item questions of the DDPPQ. The questions included the following items: (a) "In general, I have less respect for drug users than for most other patients/clients I work with" (LESSRESPECT), (b) "I feel I do not have much to be proud of when working with drug users" (PROUDOF), and (c) "At times I feel I am no good at all with drug users" (NOGOOD).

Although 26% of the respondents, ($n = 74$, $M = 2.96$, $SD = 0.820$), felt there was little they could do to help drug using populations, a majority, 80.4% ($n = 230$, $M = 3.02$, $SD = 0.744$), disagreed that they were no good at all handling substance related problems and drug-using populations generally. When asked if they were proud working with drug users, 72.1% ($n = 206$, $M = 2.90$, $SD = 0.818$) answered in the affirmative (see Table 14).

Table 14

Role specific self-esteem subgroup: Frequency of responses, Means, Standard Deviations, and Variance for perception subgroup

Questions	Strongly agree %	Agree %	Disagree %	Strongly disagree %	<i>M</i>	<i>SD</i>	Variance
LESSRESPECT	0	20.9	47.4	31.4	2.96	0.820	0.672
PROUDOF	0	22.3	48.8	28.6	2.90	0.818	0.670
NOGOOD	0	230	3.02	0.744	3.02	0.744	0.544

For the subscale of work satisfaction, the interplay of MHPs' negative or positive feelings and contentment (or lack of it) toward handling individuals who present with substance abuse related disorders was assessed using 4-item questions on the DDPPQ. The questions included the following: (a) "I want to work with drug users" (WORKWITH), (b) "in general, one can get satisfaction from working with drug users" (GETSATISFACTION), (c) "in general, it is rewarding to work with drug users" (REWARDING), and (d) "in general, I feel I can understand drug users" (UNDERSTAND). A majority of the MHPs who responded to the survey, 78% ($n = 223$, $M = 2.06$, $SD = 0.749$), either agreed or strongly agreed that they wanted to work with drug users. Approximately 70% ($n_1 = 85$, $n_2 = 86$, $M_1 = 2.25$, $M_2 = 2.21$, $SD_1 = 0.659$, $SD_2 = 0.745$) expressed they received satisfaction and believed it was generally rewarding to work with individuals who misuse substances. In addition, 89.2% ($n = 255$, $M = 1.99$, $SD = 0.533$) felt they could understand drug users (see Table 15).

Table 15

Work satisfaction subgroup: Frequency of responses, Means, Standard Deviations, and Variance perception subgroup

Questions	Strongly Agree %	Agree %	Disagree %	Strongly disagree %	<i>M</i>	<i>SD</i>	Variance
WORKWITH	20.6	57.3	17.5	4.5	2.06	0.749	0.561
GETSATISFACTION	8.4	61.9	25.9	3.8	2.25	0.659	0.435
REWARDING	14.0	55.9	24.8	5.2	2.21	0.745	0.554
UNDERSTAND	13.3	75.9	9.4	1.4	1.99	0.533	0.284

Research question 3: *Can gender, age, educational attainment, profession, region, role support, and work motivation predict MHPs' perception of their role in tackling substance abuse and related disorders in Nigeria?*

To identify predictors of MHPs' perception of their role in tackling substance abuse and related disorders, the 22-items on the DDPPQ were measured in a continuum. The theoretical assumption was that MHPs with positive perception toward tackling substance abuse and its related disorders scored lower while those with negative perception scored higher. Four items on the questionnaire were worded negatively; therefore, the scores for items 15,16, 17, and 18 on the DDPPQ were reversed to keep the score coherence. The total score was tallied for the entire questionnaire. The mean total perception score was 42.35 (*SD* = 6.255, Variance = 39.126). Total perception scores were divided into two categories because of unavailability of neutral response; '1' - Positive perception (distinctly defined perception of role), '2' - Negative perception (lack of distinctly defined perception of role). On analysis, most of the participants, 62.2% (n =

178, $M = 1.38$, $SD = 0.486$), reported positive perception of their role in tackling substance abuse related disorders (see Table 16).

Table 16

Perception Total Scores in Two Categories

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Positive ^a	178	62.2	62.2	62.2
	Negative ^b	108	37.8	37.8	100.0
	Total	286	100.0	100.0	

^aTotal scores from 26 to 44

^bTotal scores from 45 to 66

In an attempt to establish whether statistical relationships exist between the binary dependent variable (perception: positive vs negative) and the independent variables (gender, age, educational attainment, profession, region, role support, and motivation), Pearson's Chi-square test was conducted. The test was performed based on the theoretical assumption that variables in the observed data are truly independent of each other, and the sample size is relatively large to yield approximately distributed test statistics. The two-way contingency table analysis established significant relationships between perception scores in two categories and educational attainment, [Pearson χ^2 (2, $N = 286$) = 8.355, $p = 0.015$, Cramér's $V = 0.171$], region, [Pearson χ^2 (4, $N = 286$) = 15.377, $p = 0.004$, Cramér's $V = 0.232$], work motivation, [Pearson χ^2 (3, $N = 286$) = 24.086, $p < 0.0001$, Cramér's $V = 0.290$] and role support, [Pearson χ^2 (8, $N = 286$) = 21.372, $p = 0.006$, Cramér's $V = 0.273$] (see Table 17). However, there were no significant associations between perception score in two categories and gender ($p = 0.151$), age group ($p = 0.915$), and profession ($p = 0.317$); therefore, these variables were not considered for further analysis (see Table 17).

Table 17

Contingency table analysis for perception in two categories (positive vs. negative)

Variables	Positive perception		Negative perception		X^2	df	ϕ_c	P
Gender	(n)	%	(n)	%				
Mal	8	34.3	50	7.5	2.0	1	0.085	0.151
Female	80	28.0	58	20.3				
Age group					1.480	5	0.072	0.915
21-2	16	5.6	14	4.9				
26-30	38	13.3	24	8.4				
31-3	32	11.2	19	6.6				
36-40	24	8.4	14	4.9				
41-45	25	8.7	15	5.2				
>45	43	15.0	22	7.7				
Educational attain.					8.355	2	0.171	0.015*
B.Sc.	138	48.3	97	33.9				
Masters	28	9.8	10	3.5				
PhD	12	4.2	1	0.3				
Region					15.377	4	0.232	0.004***
NW	43	15.0	47	16.4				
NE	43	15.0	16	5.6				
SW	41	14.3	15	5.2				
SS	51	17.8	30	10.5				
Profession					5.892	5	0.144	0.317 ^Y
Psychiatrist	24	8.4	12	4.2				
Nurse	101	35.3	6	2.2				
Addict.	3	0.03	3	1.05				
Counselor								
Social Worker	33	11.5	21	7.3				
Psychologist	16	5.6	4	1.4				
Peer counselor	1	0.34	3	1.05				
Role support	178	52.2	108	37.8	21.372	8	0.273	0.006*
Work motivation	178	52.2	108	37.8	24.086	3	0.290	0.0001**

X^2 = Pearson's chi-square, df = degree of freedom, p = significance at 95% confidence interval, ϕ_c = Cramér's V, ^Y $p > 0.05$, * $p < 0.05$, ** $p < 0.005$, *** $p < 0.0001$

Assumption Testing: One-way ANOVA

One-way ANOVA was conducted to assess whether the means on perception total score was significantly different among groups (educational attainment, region, work motivation, and role support) previously established to be statistically significant using two-way contingency table analysis (Chi Square). Several assumptions of ANOVA (test of normality, homogeneity of variance, and independence of observations) were assessed to ensure results obtained from analysis were tenable. The homogeneity of variance in the sample was assessed via Levene's test for equality of variance to ensure that the variances between perception total score and independent variables (region, educational attainment, work motivation, and role support) were equal. The Levene's test conducted on perception total score for region, $F(3, 282) = 0.813, p = 0.483$, educational attainment, $F(2, 283) = 0.222, p = 0.801$, work motivation, $F(3, 282) = 1.996, p = 0.115$, and role support, $F(8, 277) = 0.524, p = 0.838$ were all not significantly different. This indicates that the variances of the study population are equal, thus the assumption of homogeneity of variance was also not violated (see Table 18).

Table 18

Test of Homogeneity of variance for total perception score

Variable	Levene Statistic	df_1	df_2	P
Region	0.813	3	282	0.488 ^Y
Educational attainment	0.222	2	283	0.801 ^Y
Work Motivation	1.996	3	282	0.115 ^Y
Role support	0.524	8	277	0.838 ^Y

Note. df = degree of freedom, p = significance at 95% confidence interval, ^Y $p > 0.05$

A visual inspection of the normal Q-Q plots and their histograms, and the non-significant Shapiro-Wilk's test ($p < 0.05$) in the levels of independent variables were examined. For example, work motivation, with a skewness of 0.162 ($SE = 0.472$) and a kurtosis of -0.629 ($SE = 0.918$), $p = 0.834$ for MHPs who were positively motivated toward tackling substance abuse and related disorders indicated that perception total scores were approximately normally distributed. Although there were three mild outliers in all the 286 cases processed, the boxplots were approximately symmetrical with no extreme cases. Therefore, the assumptions of normality was not violated (Cramer & Howilt, 2004; Doane & Seward, 2011 [see Table 19 and Figures 4, 5, and 6]).

Table 19

Shapiro Wilk's Test of Normality for Perception Total Score and Selected IV

Variable	Kurt	Kurt S.E	Skew	Skew S.E	P
Region					
NW	0.689	0.506	-1.24	0.255	0.427
NE	-0.045	0.613	-0.669	0.311	0.022
SS	-0.484	0.529	-0.163	0.267	0.419
SW	-0.400	0.628	-0.422	0.319	0.73
Educational attainment					
Bsc	0.296	0.317	-0.248	0.159	0.018
Masters	-0.232	0.383	-0.649	0.383	0.069
Phd	1.966	1.191	0.814	0.616	0.474
Work Motivation					
Positive	-0.629	0.918	0.162	0.472	0.834
Negative	-1.009	0.608	-0.031	0.309	0.125
Role support					
Positive	-0.913	1.481	-0.826	0.752	0.271
Negative	-0.818	1.038	-0.474	0.536	0.086

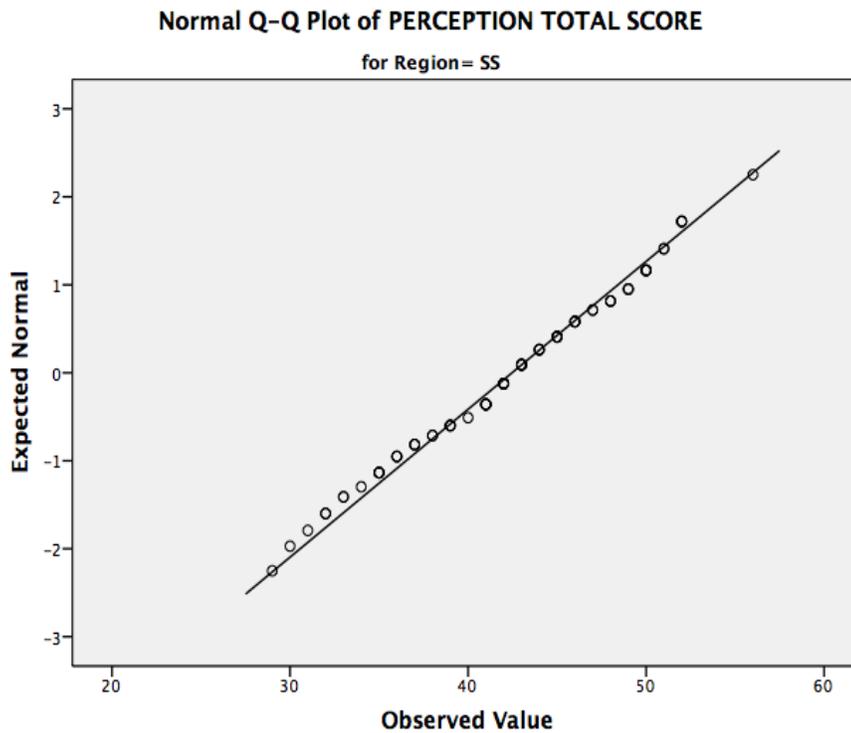
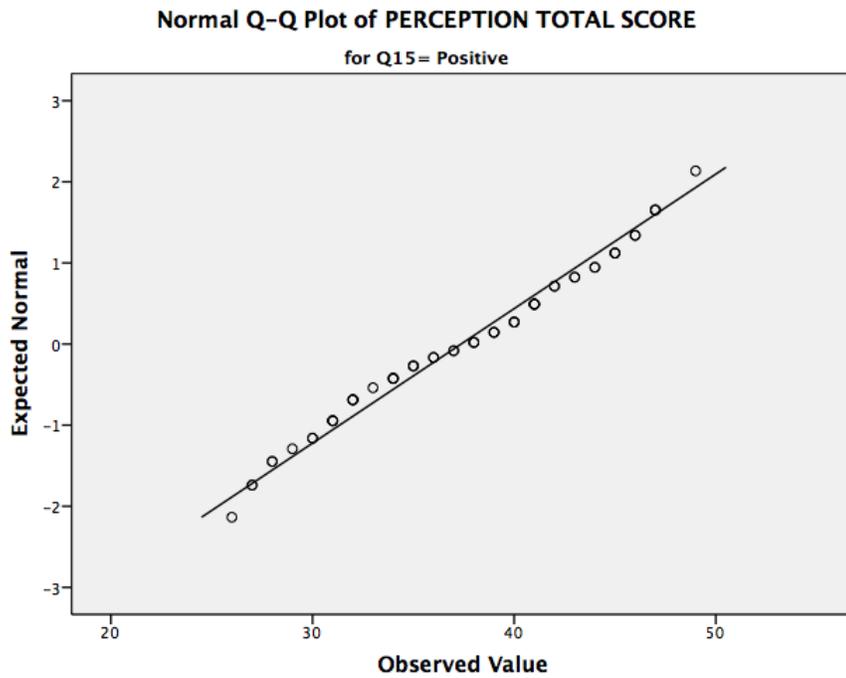


Figure 4. Normal Q-Q plot of perception total score for work motivation (Q15) and region (SS)

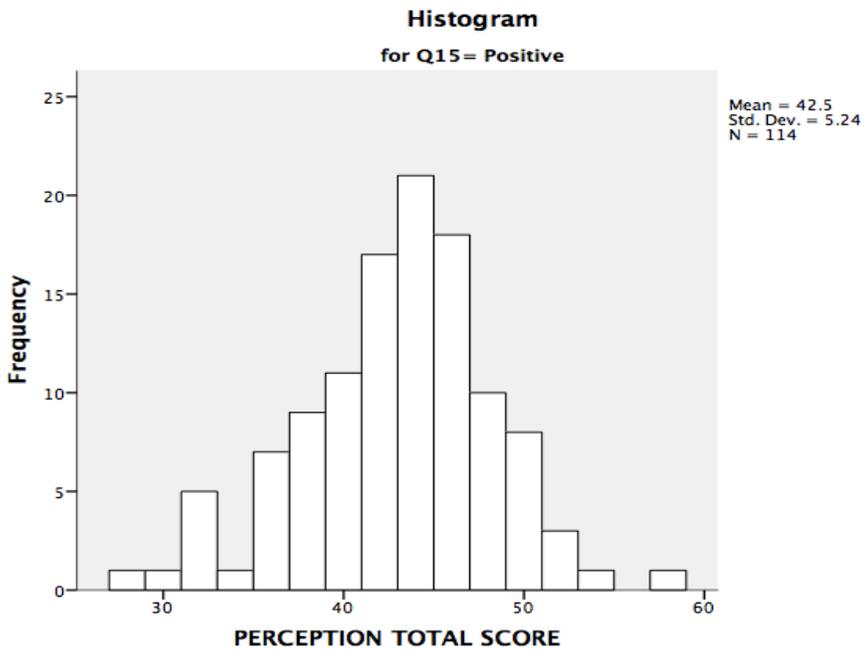
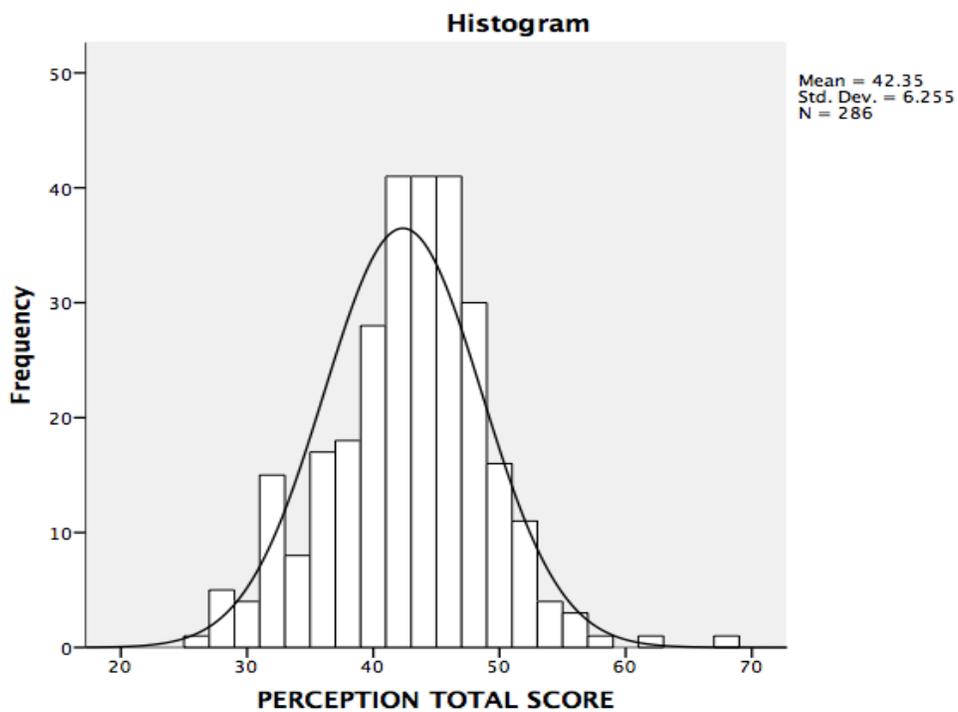


Figure 5. Histogram of perception total score and perception total score for work motivation (Q15)

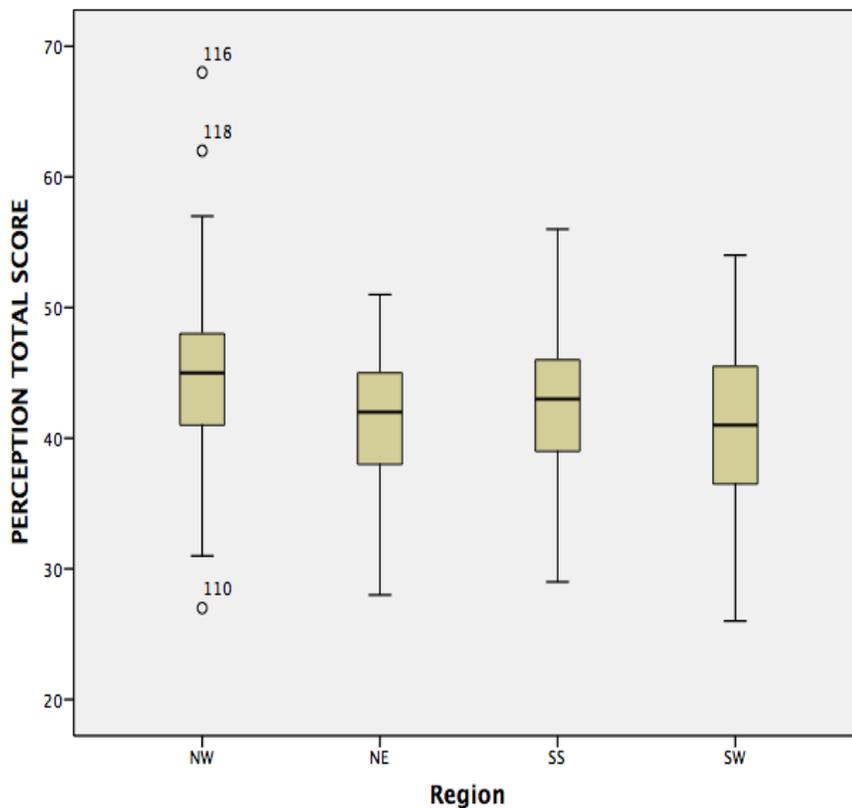


Figure 6. Box and whisker plot of perception and region of study participants (NW = northwest, NE = northeast, SS = south south, SW = south west)

Main Analysis: One-way ANOVA

A one-way ANOVA was conducted after ascertaining that the assumptions of ANOVA were not violated. Statistical significant relationships were established between perception and region, [$F(3, 282) = 6.549, p < 0.0001, \eta^2 = 0.065$], educational attainment [$F(2, 283) = 7.420, p = 0.001, \eta^2 = 0.050$], work motivation [$F(3, 282) = 25.489, p < 0.0001, \eta^2 = 0.213$], and role support [$F(8, 277) = 4.993, p < 0.0001, \eta^2 = 0.126$]. The strength of association between MHPs' perception total score and region ($\eta^2 = 6.5\%$), educational attainment ($\eta^2 = 5.0\%$), work motivation ($\eta^2 = 21.3\%$), and role support ($\eta^2 = 12.6\%$) accounted for 45.4% of the total variability in the dependent variable (perception [see Table 20]).

Table 20

One-way ANOVA for Total Perception Score and Selected Independent Variables

Variable	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P</i>	η^2
Region						
Between groups	726.344	3	242.115	6.549	<0.0001	0.065
Within groups	10424.691	282	36.967			
Educational attainment						
Between groups	555.620	2	277.810	7.420	0.001	0.050
Within groups	10595.415	283	37.440			
Work Motivation						
Between groups	2378.689	3	792.896	25.489	<0.0001	0.213
Within groups	8772.346	282	31.108			
Role support						
Between groups	1405.436	8	175.680	4.993	<0.0001	0.126
Within groups	9745.599	277	35.183			

Note. *SS* = sum of squares, *MS* = mean square, *p* = significance at 95% confidence interval, *F* = *F* statistics, η^2 = eta squared, *df* = degree of freedom

Assumption Testing: Linearity of Logit and Collinearity Statistic

To establish whether there was a linear relationship between the independent variables/predictors and the logit of the outcome variable (perception in two categories) prior to conducting logistic regression, log transformation of the predictors were computed. The Hosmer-Lemshow goodness of fit test was non-significant. The variables in the equation for the log transformations remained non significant except log

motivation ($p = 0.013$), which indicated that the assumptions of linearity in logit was somewhat met (see Table 20). In addition, collinearity statistics was further conducted via the correlation matrix of the predictor variables. The variation inflation factors(VIF) for the predictors were less than 10 and not substantially greater than one (Bowerman & O'Connell, 1990; Meyers, 1990). In addition, the tolerance level was greater than 0.2, which indicates lack of collinearity between the predictor variables. Therefore, the assumptions for logistic regression were not violated (Tables 21, 22, and 23).

Table 21

Test of Homogeneity of variance for logit of the outcome variable

Logit of the outcome variable	Chi square	<i>df</i>	<i>p</i>
Step 1	4.476	8	0.812

Table 22

Test of Homogeneity of variance for perception total score

Variable	B	<i>S.E</i>	<i>Wald</i>	<i>df</i>	<i>P</i>
LnRegion	-1.852	1.166	2.523	1	0.112
LnEducational attainment	4.700	4.822	0.950	1	0.330
LnWork Motivation	4.066	1.632	6.210	1	0.013
LnRole support	4.030	3.203	1.583	1	0.208

Note. *df*= degree of freedom, *p*= significance at 95% confidence interval, *S.E*= standard error , *Wald* = chi square test statistics, Ln= Log transformation

Table 23

Collinearity Statistic of the Predictor Variables

Variable	Tolerance	VIF
Region	0.937	1.068
Educational attainment	0.905	1.105
Work Motivation	0.944	1.059
Role support	0.991	1.009

Note. VIF= Variance Inflation Factor.

Main Analysis: Multiple Logistic Regression

Logistic regression was conducted to establish whether perception-in two categories (dichotomous into “positive” vs “negative” perception) can be predicted by the independent variables that were statistically significant in Chi-square test and one-way ANOVA (region, educational attainment, work motivation, and role support). The output of analysis indicated that educational attainment (O.R = 0.495, 95% CI = 0.263, 0.933, $p = 0.030$), work motivation (O.R = 0.548, 95% CI = 0.400, 0.750, $p < 0.0001$), and role support (O.R = 1.482, 95% CI, 1.245, 1.764, $p < 0.0001$) significantly predicted MHPs’ perception of their role in tackling substance abuse and related disorders. In other words, as work motivation reduces, MHPs are less likely to have positive perception of their role, while perception of role increases with the level of education attained. In addition, for every unit increase in role support, MHPs are approximately one and a half times more likely to have positive perception than those whose role in tackling substance abuse and related disorders are not supported (see Table 24).

Table 24

Logistic Regression Analysis for Perception (Positive vs Negative) and selected Independence Variable

Variables	B	S.E.	Wald	df	Sig.	O.R	95% CI for Exp (B) O.R)	
							Lower	Upper
Region	-.132	.086	2.367	1	.124	.876	.741	1.037
Level of Education	-.703	.323	4.730	1	.030	.495	.263	.933
Work Motivation	-.602	.160	14.132	1	.000	.548	.400	.750
Role support	.393	.089	19.572	1	.000	1.482	1.245	1.764
Constant	-.215	.703	.094	1	.759	.806		

Note. *B* = beta coefficient, *S.E* = standard error, *p* = significance at 95% confidence interval, Exp (B) = odd ratio, *df* = degree of freedom

Research question 4: *Is there a significant regional variation in attitude amongst multidisciplinary MHPs when dealing with drug-using populations in Nigeria?*

Several assumptions of ANOVA (test of normality, homogeneity of variance, and independence of observations) were assessed to ensure results obtained from analysis were tenable. For the dependent variable (attitude total score), Shapiro- Wilkis test for normality was significant, which indicated a violation of assumption of normality ($p > 0.05$; see Table 25). In addition, the histogram of attitude total score for region reflected negatively skewed graphs that are playkurtic (see Figure 8). Northwestern region had a skewness of -0.427 ($S.E = 0.254$) and a Kurtosis of -0.136 ($S.E = 0.503$). The northeastern region had a skewness of -0.229 ($S.E = 0.311$) and a kurtosis of 0.333 ($S.E = 0.613$). The south-southern region had a skewness of -0.965 ($S.E = 0.267$) and a kurtosis

of 0.547 ($S.E = 0.529$). The southwestern region had a skewness of -0.536 ($S.E = 0.319$) and a kurtosis of 0.237 ($S.E = 0.628$; see Figure 7). Therefore, a rank-based Kruskal-Wallis non-parametric test was conducted to determine if MHPs' attitude total score from four different geopolitical zones (northeast, northwest, south-south and southeastern zones of Nigeria) would be significantly different. The Kruskal-Wallis test was conducted based on the assumptions that the dependent variable (attitude total score) is measured at an ordinal level and the independent variable (region) consists of four categorical levels, with an independence of observation.

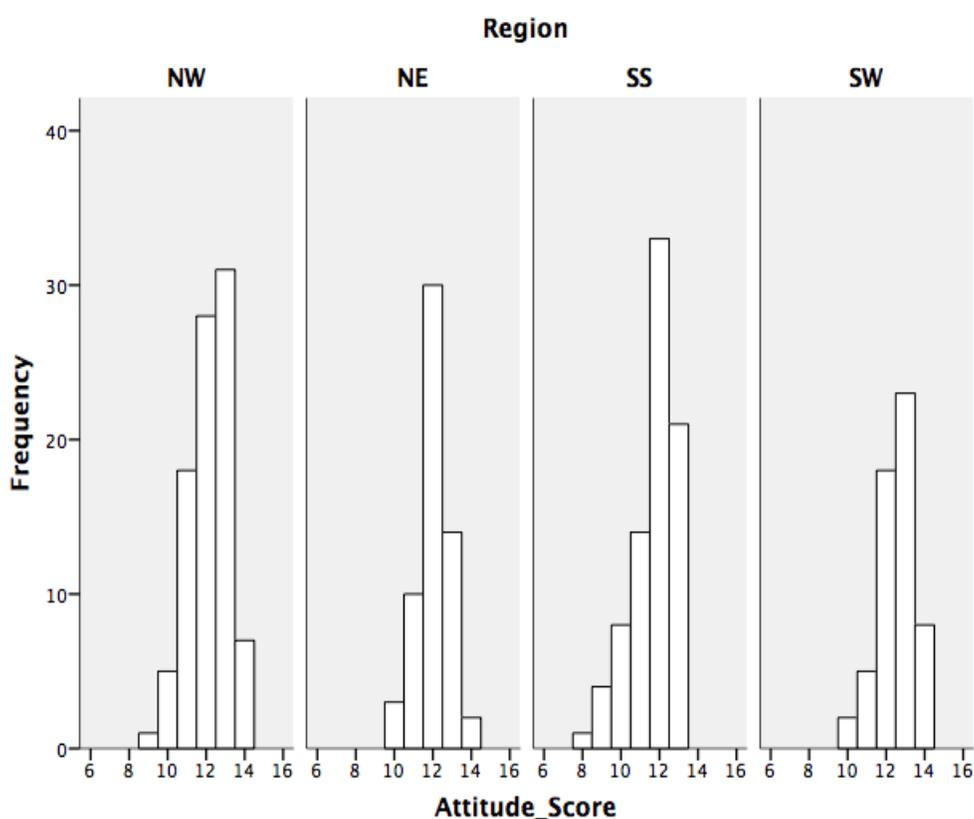


Figure 7. Histogram of attitude total score for different geopolitical zones in Nigeria

Table 25

Test of normality for attitude total score and region

Variable (Region)	Shapiro-Wilk	
	<i>df</i>	Statistics
NW	90	0.911***
NE	59	0.879***
SS	81	0.859***
SW	56	0.887***

Note. NW = northwestern region, NE = northeastern region, SS = south-Southern region, SW = southwestern region, *** $p < 0.0001$.

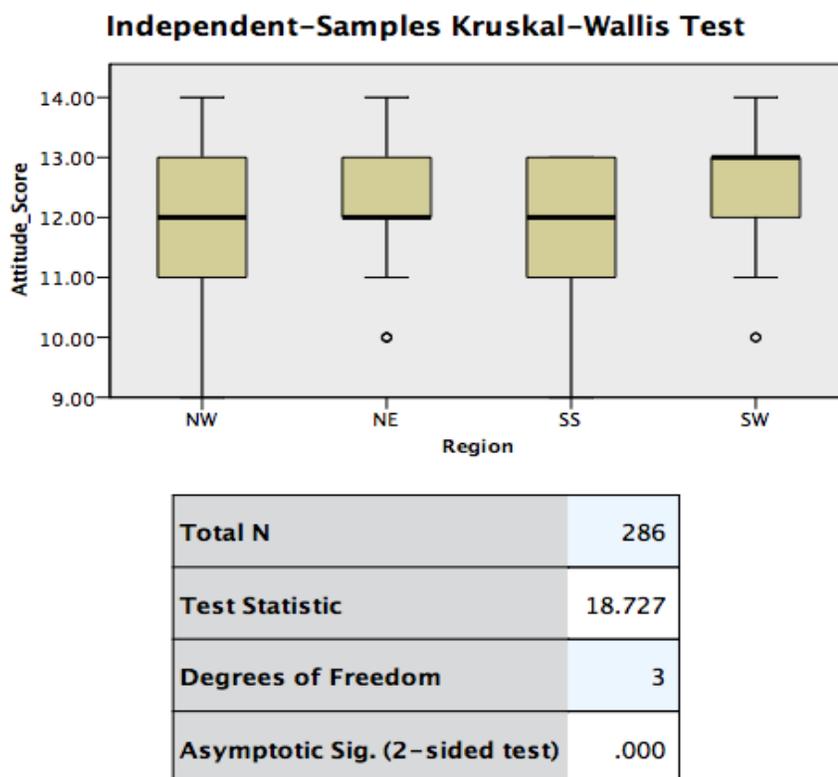
The Kruskal-Wallis test established significant regional variation in the attitude of multidisciplinary MHPs, $H(3) = 18.727$, $p < 0.0001$ (see Table 26). Step-down follow-up analysis revealed that the distribution of attitude total score varies significantly between the south-southern and the southwestern region ($p < 0.0001$; see Figure 8). There was also a significant variation in attitude between MHPs living in the northeastern and southwestern region of the country ($p < 0.028$ [see Figure 9]).

Table 26

Test summary of the Kruskal-Wallis Hypothesis

Null Hypothesis	<i>H</i>	<i>df</i>	<i>P</i>	Decision
The distribution of attitude score is the same across categories of region	18.727	3	.000	Reject the null hypothesis

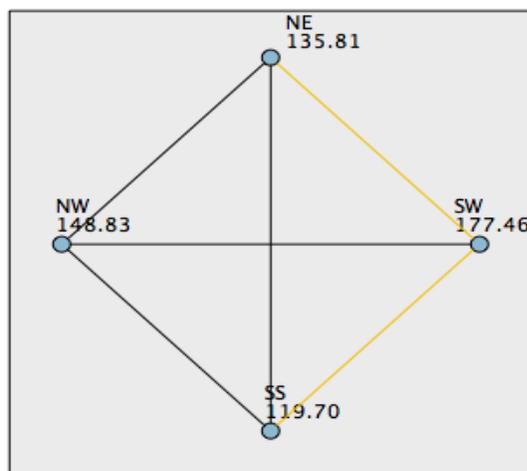
Note. X^2 = Chi-square, *df* = degree of freedom, *p* = statistical significance at 95% CI.



1. The test statistic is adjusted for ties.

Figure 8. Independent Kruskal-Wallis step-down follow-up analysis: pairwise comparisons of region based on the distribution of attitude total score

Pairwise Comparisons of Region



Each node shows the sample average rank of Region.

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
SS-NE	16.101	13.501	1.193	.233	1.000
SS-NW	29.124	12.081	2.411	.016	.096
SS-SW	-57.761	13.708	-4.214	.000	.000
NE-NW	13.023	13.213	.986	.324	1.000
NE-SW	-41.659	14.716	-2.831	.005	.028
NW-SW	-28.637	13.425	-2.133	.033	.198

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

Figure 9. Kruskal-Wallis step-down follow-up analysis: Pairwise comparisons of region based on the distribution of attitude total score

Summary

This study aimed to assess the attitudes and perception of MHPs' role toward tackling substance abuse and related disorders in Nigeria. It further aimed to identify predictors of perception and to explore regional variations in attitude when dealing with

drug-using populations. Study participants were recruited from the federal and state neuropsychiatric hospitals and mental health departments of university teaching hospitals within the four geopolitical zones of Nigeria. The study had two dependent variables, attitudes, measured with the SAAS (Chapel et al., 1985) and perception, measured with the DDPPQ (Watson et al., 2007). The independent variables in this study were age, gender, level of education, region (northeast, northwest, southeast, and south-southern regions), work motivation, and role support.

A response rate of 81.1% was achieved. Of the useable questionnaires, 31.5% (n = 90) were obtained from the northwestern region, 20.6% (n = 59) were completed by MHPs from the northeastern region. 28.3% (n = 81), and 19.6% (n = 56) were from the south-south and southwestern region of the country respectively. Just over half (51.7%) of the respondents were male, and the majority (63.3%) was aged between 21 and 40 years. More than 80% (n = 235) had undergraduate degrees while 13.3% (n = 38) and 4.5% (n = 13) had obtained either a master's degree or PhD respectively as at the time of this survey. Just over half (58%) of the 286 MHPs included for final data analysis were psychiatric nurses, 7% (n = 20) were psychologists, 18.9% (n = 54) were social workers, 2.1% (n = 6) were addiction counselors, 1.4% (n = 4) were peer counselors and 12.6% (n = 36) were psychiatrists.

To ensure results obtained from data analysis were tenable, assumptions for all statistical tests (ANOVA [homogeneity of variances and normality of distribution], logistic regression [assumption of linearity of logit. and collinearity statistics]) were conducted prior to analysis. The first research question explored MHPs' attitude regarding the use and abuse of substances in Nigeria. Attitudes of MHPs were assessed

based on the five-attitudinal subscale factors of the SAAS. MHPs who responded to the survey tended toward the non-permissive and stereotypic spectrum. Almost all the study participants disagreed that marijuana should be legalized and believed that the personal use of drugs should not be legal even in the confines of the homes of individuals who abuse substances. A substantial number of the participants expressed the opinion that people who smoke will indulge in marijuana use, and that it is almost impossible for addicts to recover because heroin is addicting. Although the participants were quite moralistic, a majority was against angry confrontation when treating individuals who misused substances. Responses on treatment intervention and treatment optimism were fairly homogenous as MHPs displayed positivity toward successful outcome of drug dependent treatment and care.

The second research question explored MHPs' perception of their role when dealing with individuals who present with SUD. MHPs' perception of their role was assessed based on the six perception subscale factors of the drugs and drug users' problem perception questionnaire (DDPPQ). A substantial number of the participants (62.2%) exhibited distinctly defined role perception. MHPs expressed self-worth, and the notion that they were well informed in handling substance abuse related disorders. Their responses also indicated they were motivated and could withstand any form of pressure because their role was supported. Therefore, the null hypothesis for the second research question was rejected.

The third research question explored predictors of MHPs' role perception by assessing the following research question and hypotheses. The two-way contingency table analysis established significant relationships between Perception (positive vs

negative perception) and educational attainment, [Pearson χ^2 (2, $N = 286$) = 8.355, $p = 0.015$, Cramér's $V = 0.171$], region, [Pearson χ^2 (4, $N = 286$) = 15.377, $p = 0.004$, Cramér's $V = 0.232$], work motivation, [Pearson χ^2 (3, $N = 286$) = 24.086, $p < 0.0001$, Cramér's $V = 0.290$], and role support, [Pearson χ^2 (8, $N = 286$) = 21.372, $p = 0.006$, Cramér's $V = 0.273$] (see Table 17). However, there were no significant associations between perception scores in 2 categories and gender ($p = 0.151$), age group ($p = 0.915$), and profession ($p = 0.317$); therefore, these variables were not considered for further analysis (see Table 17).

A one-way ANOVA was conducted after ascertaining that the assumptions of ANOVA was not violated for perception total score. Statistical significant relationships were established between perception and region, $F(3, 282) = 6.549$, $p < 0.0001$, $\eta^2 = 0.065$, educational attainment, $F(2, 283) = 7.420$, $p = 0.001$, $\eta^2 = 0.050$, work motivation, $F(3, 282) = 25.489$, $p < 0.0001$, $\eta^2 = 0.213$, and role support, $F(8, 277) = 4.993$, $p < 0.0001$, $\eta^2 = 0.126$. The strength of association between MHPs' perception total score and region ($\eta^2 = 6.5\%$), educational attainment ($\eta^2 = 5.0\%$), work motivation ($\eta^2 = 21.3\%$), and role support ($\eta^2 = 12.6\%$) accounted for 45.4% of the total variability in the dependent variable (perception).

The output from the logistic regression analysis indicated that educational attainment (O.R = 0.50, 95% CI= 0.263, 0.933, $p = 0.030$), work motivation (O.R = 0.55, 95% CI = 0.400, 0.750, $p < 0.0001$), and role support (O.R = 1.50, 95% CI, 1.245, 1.764, $p < 0.0001$) can significantly predict MHPs' perception of their role in tackling substance abuse and related disorders. In other words, as work motivation reduces, MHPs are less likely to have positive perception of their role, while perception of role increases with the

level of education attained. In addition, for every increment in role support, MHPs are approximately one and a half times more likely to have positive perception than those whose role in tackling substance abuse and related disorders are not supported. The null hypothesis was therefore rejected in favor of educational attainment, work motivation, and role support because they can be used to predict the perception of MHPs' role toward tackling substance abuse and related disorders.

Regional variation in attitude amongst multidisciplinary MHPs when dealing with drug-using populations in Nigeria was also explored. The Kruskal-Wallis test established significant regional variation in the attitude of multidisciplinary MHPs, $H(3) = 18.727$, $p < 0.0001$. Step-down follow-up analysis revealed that the distribution of attitude total score vary significantly between the south-southern and the southwestern region ($p < 0.0001$). There was also a significant variation in attitude between MHPs who lived in the northeastern and southwestern region of the country ($p < 0.028$). Therefore, the null hypothesis was rejected.

In Chapter 5, I reiterate the primary purpose of my research study. The key findings in Chapter 4 are concisely summarized and compared with peer-reviewed literature. The study limitations, positive social change implications and recommendations for further research are described.

Chapter 5: Discussions, Conclusions, and Recommendations

MHPs play a pivotal role in enhancing the treatment outcome, reintegrating, and rehabilitating individuals who abuse substances into the mainstream society (Caplehorn et al., 1997; Humphreys et al., 1996; van Boekel et al., 2013). At the time of data collection, few empirical studies have examined regional variation in attitudes of MHPs when dealing with drug using clients. No study has explored attitude about the use and abuse of substances and MHPs' perception of their role as it relates to drug-using populations in Nigeria, despite its persistence increase in the prevalence of substance abuse, which is much higher than average compared to other African countries. Thus, the purpose of this study was to assess multidisciplinary MHPs' attitudes about the use and abuse of substances and to assess how they perceived their role in tackling substance abuse and related disorders in Nigeria. The study also sought to identify predictors of perception and to explore possible regional variations in attitude toward the five subscale factors of SAAS: permissiveness, treatment intervention, non-stereotypes, treatment optimism, and non-moralism.

In the current research, I explored socio-demographic variables that may affect attitude and role perception of MHPs. This included age, gender, region, profession, educational attainment, work satisfaction, and role support. Study participants were asked to complete a demographic survey and two questionnaires. The SAAS (Chapel, Veach & Krug, 1985) provided information on the participants' attitudes toward drug-using populations while the DDPPQ (Watson et al., 2007) assessed MHPs' role perception toward substance abuse and related disorders.

Interpretation of Findings

In this study, MHPs tended toward the non-permissive and stereotypic spectrum as almost all the study participants disagreed to legalizing marijuana and expressed that it is abnormal for a teenager to experiment with drugs. The response from the study participants was in line with the studies conducted by Kelleher and Cotter, (2009) and Kalebka et al. (2012) amongst healthcare practitioners in different emergency centers. A majority of the participants in their studies disagreed to legalization of marijuana. The MHPs who responded to the surveys reiterated the importance of life-long abstinence, which is in line with the National Institute on Drug Abuse (NIDA). The NIDA advocates extended abstinence as a requirement for sustained drug recovery because of an increase in the odds of recovery from addiction after an extended period of abstinence (NIDA, 2007).

Participants maintained a stereotypical principle of conduct as a majority agreed that individuals who smoke would eventually use hard drugs, and those who indulge in the use of marijuana would not respect authority. Numerous studies have established negative stereotypical attitudes toward individuals who misuse substance (Brooks-Harris, Heesacker & Mega-Millan, 1996; Karam-Hage, Nerenberg, & Brower, 2001; McLaughlin, McKenna & Lesslie, 2000). These researchers reported a lower regard and unwillingness for caregivers to provide services to this population group. In addition to these opinions, almost all the participants believed that marijuana use would lead to mental illness. This is in line with several studies that have established association of marijuana use with the risk of affective or psychotic mental health outcomes (Dixon, Haas, Weiden, Sweeney, & Frances, 1990; Hall & Dagenhardt, 2000; Moore et al.,

2007). Research conducted by Galinsky et al. (2005) demonstrated the activation of stereotypic behavior and its strong effects on subtle overt behavior and hostile intent. Findings from their study established the importance of developing a healthy bond to reduce prejudice and stereotyping. As described by Goldstein & Cialdini (2007), understanding an individual's feelings, intentions, thoughts, and motivations is embedded in perspective taking, which can reduce the negativity of stereotypic attitude.

A majority of the participants expressed the importance of controlling drug use by law because the use of drugs could totally ruin the lives of youths. They pointed to the fact that street pushers expose young people to drug use. Although the participants exhibited a high degree of moral conservatism and associated addiction to drugs as weak will, they disagreed to angry confrontation when treating individuals who misuse substances. This is in line with the brief intervention guidelines, motivating young adults toward substance abuse treatment and care as described by Miller and Sanchez (1993). Research conducted by Vauclair and Fisher (2011) established that moralistic attitudes displayed by individuals could be based on the discourse of a community or a particular group that appraise themselves as being right or wrong based on social obligations, roles, and interpersonal duties. These researchers explored the influence of cultural values against the backdrop of moral attitudes. They demonstrated that individual moral attitudes, as expressed by MHPs in my study, could be due to cultural *embeddedness* (Vauclair & Fisher, 2011).

Responses to treatment intervention and treatment optimism were fairly homogenous and relatively high. MHPs displayed positivity toward successful outcome of drug dependent care and treatment. An overwhelming number of participants believed

family involvement and group therapy were integral to the treatment of drug addiction. Numerous studies have evaluated the efficacy of multidimensional family therapy (Liddle, Rowe, Dakof, Henderson, & Greenbanum, 2009; Smith, Hall, Williams, An, & Gotman, 2006) and group therapy (Liddle, Rower, Dakof, Ungaro, & Henderson, 2004; Najavitis, Gallop, & Weiss, 2006) in successful treatment outcomes from drug addiction. In a randomized clinical trial, Smith et al. (2006) assessed the efficacy of family oriented strength therapy, incorporated with several decision-making exercises and cognitive emotional process. The researchers established significant reductions in substance use that tends toward full remission and abstinence at follow-ups (Smith et al., 2006). In addition, the study conducted by Liddle et al. (2009) demonstrated the efficacy of group therapy in the reduction of substance use related problems. In a follow-up period of 12 months, the researchers established increased abstinence and rapid decrease in reported problems associated with substance use.

Participants expressed the opinion that addiction to drug was treatable even in individuals with a history of relapse. However, their responses also suggested that they did not find working with drug-dependent persons as pleasant. The attitudes exhibited toward treatment optimism did not deviate from the research conducted by Kelleher and Cotter (2009), as this view was expressed by a majority of their study participants. Peckover and Childlaw (2007) established discourses of risk and prejudice as factors that affect provision of service to individuals who misuse substances. Healthcare practitioners perceive themselves as vulnerable to care for clients who misuse substances; therefore, they described their overall experience as unpleasant (Peckover & Childlaw, 2007).

However, this attitude might translate into ineffective and judgmental care to clients who misuse substances (McClelland, 2006).

MHPs who responded to the survey exhibited distinctly defined perceptions of their role in tackling substance abuse and related disorders. An overwhelming number of respondents believed they knew enough about both the psychological and physical effects of drug use (96.2%) and could appropriately advise clients who misuse substances (99.3%). The participants also expressed confidence in their right to handle substance related disorders (96.5%) and exhibited goal-oriented behaviors due to the support they received in the area of clarifying their professional responsibilities (75.2%).

In this study, role support was a strong predictor of perception toward tackling substance abuse and related disorders as these accounts for 12.6% of the total variability in the dependent variables. In other words, for every single increase in role support, MHPs had the potential to exhibit distinctly defined perception of their role toward tackling substance abuse and related disorders. This was in line with the study conducted by Ford et al. (2008). Role support, as indicated by these researchers, is an integral determinant of therapeutic attitude exhibited to clients who misuse substances. However, existing literature reported low levels of role support for mental health practitioners subsequently resulting into lack of adequate care to this population group as their healthcare providers struggle to provide adequate treatment (Chu & Galang, 2013; Happell & Taylor, 1999). This also reflects outcomes of previous research (Barry, Tudway & Blissett, 2002; Ford et al., 2008; Howard & Chung, 2000a, 200b; Loughran et al., 2010; Ryrie & McGowan, 1998) on the importance of ongoing further support for

multidisciplinary healthcare workers toward clients who misuse substances as they expressed deficit in support structure.

This study identified educational attainment as a predictor of MHPs' role perception toward tackling substance abuse and related disorders. Responses from the study participants suggest that obtaining only undergraduate degree might not be enough to handle drug-using populations effectively. In this current study, educational attainment of participants beyond undergraduate degree increased positive role perception in tackling substance abuse. Happell and Taylor (1999) attributed negative perception of role to inadequate educational preparation in substance use treatment and care. Acknowledging deficits in formal education toward the provision of adequate care and treatment, as described by McLaughlin, McKenna, Leslie, Moore, and Robinson (2006) and Rassool and Rawaf (2008), with emphasis on the professional subgroup of nursing, will encourage training and supplemental workplace education on substance abuse and related disorders (Kelleher & Cotter, 2009). The importance of adequate formal educational preparations was described by Kelleher and Cotter (2009) as an effective tool in minimizing negative attitudes, prejudice, stigma, and misconceptions faced by healthcare practitioners generally toward the provision of service to this population group.

This study identified work motivation as a predictor of role perception. Substantial numbers of MHPs who responded to the study believed they could do more to help clients who misuse drugs. Several studies have assessed the impact of motivation on role perception (Farmer & Greenwood, 2001; Skinner et al., 2005). Skinner et al. described MHPs' confidence of their prerogative to handle substance abuse and related

disorders (role legitimacy) and being well informed in dealing with drug using populations (role legitimacy) as a framework of motivational factors for treating individuals who misuse substances (Skinner et al., 2005). Lack of adequate work motivation, as described by Janibrak, Deane, and Williams (2014), increases burnout and increase MHPs' intention to leave service provision after training.

The findings of this study did not establish statistical relationships between age, gender, and profession of multidisciplinary MHPs. In line with other studies, sex, profession, and gender were not found to be statistically significant toward exhibiting higher regard and role perception to individuals who misuse substances (Howard & Chung, 2000a, 2000b; Meril & Ruben, 2000; Skinner, Roche, Freeman, & McKinnon, 2009). However, contrary to the study conducted by Vargan (2012), younger participants (O.R = 2.18) and females (O.R = 3.42) showed stronger positive association toward interpersonal relationships with substance misuse clients. Russel et al. (2011) also corroborated this fact as they established age and professional membership as predictors of addiction treatment providers' level of confidence toward service provision to this population group.

Although few empirical studies have explored regional variation in attitudes of MHPs toward service provision to drug using populations, this current study established statistical significant regional variation in the attitudes of multidisciplinary MHPs when dealing with drug-using populations in Nigeria. Step-down follow up analysis revealed that the distribution of attitude total score vary significantly between the south-southern and southwestern region ($p < 0.0001$). There was also a significant variation in attitude between MHPs living in the southwestern and northeastern region of Nigeria ($p < 0.028$).

Given that regional factors strongly influence the prevalence of substance abuse, as described by Chu and Galang (2013), the variation in prevalence of substance abuse within the six geopolitical zones of Nigeria could affect the attitude of MHPs whose mandate is to rehabilitate and reintegrate this population group into the mainstream society.

The multiethnic nature, cultural diversity, accessibility, and availability of mental health services in Nigeria reflect rural to urban and northern to southern skew as most mental health services are in the southern and urban centers of the country (Ayorinde et al., 2004). In addition, the religious practices in Nigeria accentuate its ethnic and regional distinctions and have being apparently divided into two main religions where Christianity predominates in the southern region of the country and Islam in the north (CAAH). It could therefore be deduced from this current study that variations in culture, ethnicity, religion, and accessibility to healthcare services that predominates in different regions of Nigeria could greatly impede delivery of unbiased and less stereotypic care to clients.

It can be argued that variations in attitudes based on structural systems within which MHPs work as barriers to optimum care and treatment is probably not peculiar to Nigeria. Todd et al. (2002) established regional variation in service structures and treatment approaches as a major barrier that affects optimal care delivery to clients who presents with mental health disorders and coexisting substance use in New Zealand. The researchers pointed out structural deficits and uncoordinated treatment and care for individuals with coexisting disorders as barriers to optimum care (Todd et al., 2002). Chu and Galang (2013) reiterated the importance of regional factors such as geographical variation and differences in healthcare settings as essential to describe healthcare

professionals' attitudes comprehensively and accurately toward substance abuse and related disorders.

Theoretical Background

The theoretical framework adapted in this current study was the theory of planned behavior (Ajzen, 1991). According to this theory, achieving a particular behavior is dependent on both behavioral control (ability) and intention (motivation). Ajzen posited that human behaviors are guided by some basic set of assumptions on varying degrees of beliefs (Ajzen, 1991). These include beliefs about the existence of impeding or facilitating factors that may affect the performance of a given behavior and the perceived influence of these factors (control beliefs; Ajzen, 1991), normative beliefs about other peoples' expectations, and beliefs about the seeming consequences of a behavior (behavioral beliefs; Ajzen, 1991). The probability of engaging in a particular behavior by intention, which is a function of PBC, subjective norm, and attitude toward taking up a particular behavior, was therefore clearly illustrated in this study. The TPB adapted provided an in-depth understanding of MHPs' attitude toward substance abuse and related disorders. The causal relationship established between perception and the demographic variables (educational attainment, role support, and motivation) elucidated MHPs' perception of the difficulty or ease to tackle substance abuse and related disorders in Nigeria.

In this study, role support and work motivation as predictors of MHPs' perception toward tackling substance abuse and related disorders could be viewed as facilitating factors that positively affect provision of service to this population group. Furthermore, educational attainment as a significant predictor of role perception established the

importance of creating effective communication and educational strategies toward modifying behavior and intention. The applicability of TPB to these findings necessitates the need to assess planned behavioral control and norms, which could be embedded in regional variations of MHPs' attitude when dealing with drug-using populations.

TPB, as seen in this study, and predicting a behavior provided a standard model for modifying behavior where the combination of decisional autonomy, social approbation, positive attitude, and self efficacy may increase the likelihood of performing a particular behavior and also strengthen individuals' behavioral intention (Casper, 2007) while providing gateway to positive behavioral modification (Meyer, 2002).

Limitations

This study, just as every other survey-based study, was not without limitations as it relied on a self-report method of data collection from the participants. Responses might not be an accurate reflection of the study participants' attitude and role perception toward substance abuse and related disorders. The participants might have indicated a generally acceptable norm of the society, which might have led to an imprecision in data collected. Moreover, results from non-participants might have caused a substantially different outcome. Furthermore, only MHPs licensed to practice in Nigeria were surveyed. Consequently, other HCPs, such as medical assistance, primary care physicians, and general practitioners, who might have encountered patients with substance-related addictive disorders, were excluded from the study.

Participants in this study were recruited from mental health departments of university teaching hospitals, federal, and state neuropsychiatric hospitals in four geopolitical zones of the country. Therefore, the findings might not reflect the attitudes

and role perception of MHPs in all the six geopolitical zones of the country combined. However, regions and states surveyed were randomly selected to have an unbiased representation of MHPs in the country. This form of sampling technique allowed study participants to have an equal and known chance of being selected (Frankfort-Nachmias & Nachmias, 2008; Sim & Wright, 2002). The probability technique employed also helped to reduce bias in the pool of subjects available and allowed for generalizability of results to the entire population, thereby securing the external validity of the research (Frankfort-Nachmias & Nachmias, 2008; Sim & Wright, 2002).

To study the functional status of mental health professionals' attitudes and perception toward tackling substance abuse and related disorders, I conducted a cross-sectional study design. This method of data collection is not without limitations as responses from study participants represented a snap shot in time. Responses may therefore differ entirely if another timeframe had been chosen. Another major limitation of this study design was that the temporal sequence between some modifiable independent variables (work motivation, and role support) and the outcome variables (attitude and perception) might not establish the direction of relationship. Consequently, it might be difficult to determine whether the exposure (work motivation and role support) resulted from the outcome (attitude and perception) or the outcome followed exposure. The results obtained in my study should therefore be interpreted cautiously because significant association is not always synonymous with causation.

In this study, complex issues and opinions that could have influenced the attitudes and perception of MHPs' role toward tackling substance abuse and related disorders could not be explored in great depth due to the research tool (questionnaire) that was used

for data collection (Sim & Wright, 2002). The closed ended questions on the survey tool constrained responses of study participants to fixed response options, which did not allow for provision of comprehensive information regarding issues of personal concern toward service provision for drug-using clients (Sim & Wright, 2002).

Implications for Social Change

Findings of this study suggests that educational attainments beyond undergraduate degree might be prerogative to exhibiting distinctly defined perception of role in tackling substance abuse and related disorders by MHPs. Although, this finding might not be absolutely proven, it might imply knowledge gap and deficit in formal education toward provision of adequate care and treatment. Educational institutions and health services should consider incorporating structured program and adequate training strategies on roles and responsibilities of multidisciplinary MHPs to serve as an adequate base for the delivery of client-centered treatments and care for this population subgroup.

This study highlighted the positive effect of motivation and organizational support for MHPs working with drug-using populations. Because lack of adequate motivation and role support increases MHPs' burnout (Jambrak et al., 2014), it is therefore expedient to review interagency organizational structure and contextual preconditions for MHPs that will translate into improved delivery of quality drug treatment and care toward clients who present with substance abuse related disorders.

In addition to the aforementioned, a need exists for the development of consensus concerning guidelines on substance abuse attitude treatment and care. This study emphasized the impact of regional variations on attitude based on different structural systems and treatment approaches in service delivery. A holistic approach toward

standardization of drug treatment and care that takes into consideration cultural differences, diverse religions, and ethnic mix predominating in the different geopolitical zones of the country should therefore be implemented to foster the reintegration and rehabilitation of this population group into the mainstream society.

Finally, drug related intervention and policies should be targeted at reducing stereotypic attitude and stigmatization of drug-using populations that will translate into improved overall mental and physical wellbeing of individuals who present with substance abuse disorders. This can be executed by holding trainings in various neuropsychiatric hospitals and mental health departments of teaching hospitals. It is also important to emphasize the rights of patients to receive drug treatment and care with no prejudice based on ethnicity, religion, sex, or cultural orientation.

Recommendations for Further Study

Recommendations for further research can be proposed on several levels based on the findings of this study. A nationwide study with a representative sample on the attitude of HCPs generally, which incorporates a phenomenological approach, should be conducted. This would allow for complex issues and opinions that could influence the attitude and perception of MHPs' role toward tackling substance abuse and related disorders to be explored in great depth. The findings of this study also emphasized the need to investigate the consequences and effects of stereotypic attitude and regional variation in attitude of MHPs toward drug using populations. In addition, longitudinal study designs that incorporate patients' perceptions of drug treatment and care are recommended to foster evidence-based treatment that is client centered.

Conclusions

The purpose of this study was to assess the attitudes and perception of MHPs' role toward tackling substance abuse and related disorders in Nigeria, to establish predictors of role perception, and to explore regional variation further in attitude amongst multidisciplinary MHPs when dealing with drug-using populations. Although participants exhibited a high degree of moral conservatism and tended toward the non-permissive and stereotypic spectrum, their perception of role toward substance abuse and related disorders were positive and distinctly defined. Predictors of role perception as identified in this study include educational attainment, work motivation, and role support. In addition, a statistically significant regional variation in attitudes of multidisciplinary MHPs was established. This study identified a knowledge gap and possible deficit in formal education as an impediment to the provision of optimal drug dependent care and treatment. The study reiterates the importance of adequate formal educational preparations, organizational support, motivation, and the need for a holistic approach toward standardization of drug dependent treatment and care to individuals who misuse substances.

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Appendix B: Drugs and Drug Users' Problems Perceptions Questionnaire (DDPPQ)

Please indicate how much you agree or disagree with each of the following statements about working with people who use illicit or legal drugs in a non-therapeutic way.

PLEASE CIRCLE ONE FOR EACH QUESTION [tick appropriately]

1. I feel I have a working knowledge of drugs and drug related problems.

Strongly Agree Agree Disagree Strongly Disagree

2. I feel I know enough about the causes of drug problems to carry out my role when working with drug users.

Strongly Agree Agree Disagree Strongly Disagree

3. I feel I know enough about the physical effects of drug use to carry out my role when working with drug users.

Strongly Agree Agree Disagree Strongly Disagree

4. I feel I know enough about the psychological effects of drugs to carry out my role when working with drug users.

Strongly Agree Agree Disagree Strongly Disagree

5. I feel I know enough about the factors, which put people at risk of developing drug problems to carry out my role when working with drug users.

Strongly Agree Agree Disagree Strongly Disagree

6. I feel I know how to counsel drug users over the long term.

Strongly Agree Agree Disagree Strongly Disagree

7. I feel I can appropriately advise my patients/clients about drugs and their effects.

Strongly Agree Agree Disagree Strongly Disagree

8. I feel I have the right to ask patients/clients questions about their drug use when necessary.

Strongly Agree Agree Disagree Strongly Disagree

9. I feel that my patients/clients believe I have the right to ask them questions about drug use when necessary.

Strongly Agree Agree Disagree Strongly Disagree

10. I feel I have the right to ask a patient for any information that is relevant to their drug problems.

Strongly Agree Agree Disagree Strongly Disagree

11. If I felt the need when working with drug users I could easily find someone with whom I could discuss any personal difficulties that I might encounter.

Strongly Agree Agree Disagree Strongly Disagree

12. If I felt the need when working with drug users I could easily find someone who would help me clarify my professional responsibilities.

Strongly Agree Agree Disagree Strongly Disagree

13. If I felt the need I could easily find someone who would be able to help me formulate the best approach to a drug user.

Strongly Agree Agree Disagree Strongly Disagree

14. I want to work with drug users.

Strongly Agree Agree Disagree Strongly Disagree

15. I feel that there is little I can do to help drug users.

Strongly Agree Agree Disagree Strongly Disagree

16. In general, I have less respect for drug users than for most other patients/clients I work with.

Strongly Agree Agree Disagree Strongly Disagree

17. I feel I do not have much to be proud of when working with drug users.

Strongly Agree Agree Disagree Strongly Disagree

18. At times I feel I am no good at all with drug users.

Strongly Agree Agree Disagree Strongly Disagree

19. On the whole, I am satisfied with the way I work with drug users.

Strongly Agree Agree Disagree Strongly Disagree

20. In general, one can get satisfaction from working with drug users.

Strongly Agree Agree Disagree Strongly Disagree

21. In general, it is rewarding to work with drug users.

Strongly Agree Agree Disagree Strongly Disagree

22. In general, I feel I can understand drug users.

Strongly Agree Agree Disagree Strongly Disagree

Appendix C: Substance Abuse Attitude Survey (SAAS)

Factor I: Permissiveness

1. Marijuana should be legalized.
2. Personal use of drugs should be legal in the confines of one's own home.
3. Daily use of one marijuana cigarette is not necessarily harmful.
4. It can be normal for a teenager to experiment with drugs.
5. Lifelong abstinence is a necessary goal in the treatment of problematic drug use.
6. Once a person becomes drug-free through treatment he can never become a social user.
7. Parents should teach their children how to use drugs.

Factor II: Treatment Intervention

1. Family involvement is a very important part of the treatment of drug addiction.
2. The best way to treat drug-dependent people is to refer them to a good treatment program
3. Group therapy is very important in the treatment of drug addiction.
4. Urine drug screening can be an important part of treatment of drug misuse.
5. Long-term outpatient treatment is necessary for the treatment of drug addiction.
6. Paraprofessional counselors can provide effective treatment for drug misusers.

Factor III: Non-stereotypes

1. People who use marijuana usually do not respect authority.
2. Smoking leads to marijuana use, which, in turn, leads to hard drugs.
3. Marijuana use leads to mental illness.
4. Heroin is so addicting that no one can really recover once he/she becomes an addict.

5. All heroin use leads to addiction.
6. Weekend users of drugs will progress to drug misuse.
7. A hospital is the best place to treat a drug addict.
8. Recreational drug use precedes drug misuse.

Factor IV: Treatment optimism

1. Drug addiction is a treatable illness.
2. A drug-dependent person who has relapsed several times probably cannot be treated.
3. Most drug-dependent persons are unpleasant to work with.
4. A drug-dependent person cannot be helped until he/she has hit "rock bottom."

Factor V: Non-moralism

1. Street pushers are the initial source of drugs for young people.
2. Drug misuse is so dangerous that it could destroy the youth of our country if not controlled by law.
3. Angry confrontation is necessary in the treatment of drug addicts.
4. Drug misusers should only be treated by specialists in the field.
5. Addiction to drug is associated with a weak will.
9. Using any hard drugs shortens one's life span.

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Appendix F: NHREC Approval


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 Promoting Highest Ethical and Scientific Standards
for Health Research in Nigeria


Federal Ministry of Health

NHREC Protocol Number NHREC/01/01/2007-28/11/2014
 NHREC Approval Number NHREC/01/01/2007-30/11/2014b
 Date: December 2, 2014

**Re: Mental Health Professionals' Attitude and Perception of their Role in Tackling Substance Abuse and Related Disorders
in Nigeria**

Health Research Ethics Committee (HREC) assigned number: NHREC/01/01/2007

Name of Student Investigator: Olubusayo Ruth Akinola
 Address of Student Investigator: PhD Student
 Walden University
 olubusayo.akinola@waldenu.edu
 +2348033563765

Date of receipt of valid application: 28-11-2014
 Date when final determination of research was made: 30-11-2014

Notice of Expedited Review and Approval

This is to inform you that the research described in the submitted protocol, the consent forms, advertisements other participant information materials have been reviewed and *given expedited committee approval by the National Health Research Ethics Committee.*

This approval dates from 30/11/2014 to 29/11/2015. Note that no participant accrual or activity related to this research may be conducted outside of these dates. *All informed consent forms used in this study must carry the HREC assigned number and duration of HREC approval of the study.* In multiyear research, endeavour to submit your annual report to the HREC early in order to obtain renewal of your approval and avoid disruption of your research.

The National Code for Health Research Ethics requires you to comply with all institutional guidelines, rules and regulations and with the tenets of the Code including ensuring that all adverse events are reported promptly to the HREC. No changes are permitted in the research without prior approval by the HREC except in circumstances outlined in the Code. The HREC reserves the right to conduct compliance visit your research site without previous notification.

Signed

Clement Adebamowo BMChB Hons (Jos), FWACS, FACS, DSc (Harvard)
 Chairman, National Health Research Ethics Committee of Nigeria (NHREC)

Department of Health Planning, Research & Statistics
 Federal Ministry of Health
 11th Floor, Federal Secretariat Complex Phase III
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Appendix G: CITI Completion report

COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI)**HUMAN RESEARCH CURRICULUM COMPLETION REPORT**

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INSTITUTION West African Bioethics Training Program

EXPIRATION DATE 11/24/2016

GROUP 2 - INVESTIGATORS

COURSE/STAGE: Basic Course/1

PASSED ON: 11/25/2014

REFERENCE ID: 14595883

REQUIRED MODULES	DATE COMPLETED
Introduction	11/16/14
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Defining Research with Human Subjects - SBE	11/19/14
The Federal Regulations - SBE	11/19/14
Assessing Risk - SBE	11/19/14
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Privacy and Confidentiality - SBE	11/19/14
Research with Prisoners - SBE	11/25/14
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International Research - SBE	11/25/14
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Avoiding Group Harms - U.S. Research Perspectives	11/25/14
Vulnerable Subjects - Research Involving Workers/Employees	11/25/14
Conflicts of Interest in Research Involving Human Subjects	11/25/14
West African Bioethics Training Program Module	11/25/14

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Paul Braunschweiger Ph.D.
Professor, University of Miami
Director Office of Research Education
CITI Program Course Coordinator

Appendix H: West African Bioethics Certificate of Completion



West African Bioethics

Monday, December 01, 2014

NHREC/TR/02/06/2007a

Certificate of Completion

In recognition of successful completion of the human-subject protection education requirements based on the Collaborative IRB Training (CITI) Program - an online training program of the West African Bioethics Training Program and the University of Miami, Florida. This certifies that

Olubusayo Akinola

AS A SOCIAL AND BEHAVIOURAL SCIENCE INVESTIGATOR

- ◆ *reviewed regulatory and informational documents on human-subject protection*
- ◆ *passed a quiz on the responsible conduct of human studies*
- ◆ *signed a statement of commitment to the protection of the rights and welfare of human subjects participating in research.*

Dr. Clement A. Adebamowo
BM ChB (Hons), FWACS FACS ScD
Professor of Surgery
Director, West African Bioethics Training Program

Cc: Program Administrator, WAB

Appendix I: Letter Soliciting Participation

INVITATION TO PARTICIPATE IN A RESEARCH

Invitation to participate in the research project titled: “MHPs’ attitude and Perception of their Role in Tackling Substance Abuse and Related Disorders in Nigeria

Dear Sir/Madam,

We are conducting a survey as part of a research study to increase our understanding of personal attitudes and perception of MHPs’ role towards clients that misuse substances.

As a mental health professional, you are in an ideal position to give us valuable first hand information from your own perspective.

The questionnaire takes around 20 minutes to fill and is very informal. We are simply trying to capture your thoughts and perception of your role as a mental health professional in Nigeria. Your responses to the questions will be kept confidential and the survey will in no way reveal any personal identifiers.

There is no compensation for participating in this study. However, your participation will be a valuable addition to our research and findings could lead to greater understanding of how to reintegrate individuals who misuse substances into the mainstream society.

If you have any pertinent questions about your rights as a research participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is 001-xxx-xxx-xxxx.

If you have any questions, please feel free to contact me (see below for contact information).

Thank you,

Olubusayo Akinola

Appendix J: Permission to reproduce Figure 1 in “The theory of Planned Behavior”

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