[RESEARCH ARTICLE]

Occupational therapists' intervention of substance-related and addictive disorders in South Africa

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KEYWORDS

Model of Creative Ability (VdTMoCA), ethical reasoning strategy, cognitive behavioural therapy, relapse prevention, good health and well-being, evidence-based interventions and outcomes

HOW TO CITE THIS ARTICLE

Rabambi M, Aluko O, Gomes D, Jacobs CE, Pohl CF, Rossouw C, van Blerk S, van Zyl A, Ferrett K. Occupational therapists' intervention of substance-related and addictive disorders in South Africa. *South African Journal of Occupational Therapy.* Vol55 No2, August 2025.
DOI: https://doi.org/10.17159/2310-3833/2025/vol55no3a9

ARTICLE HISTORY

Received: 19 January 2023
1st Review: 6 August 2023
Revised: 6 February 2024
2nd Review: 21 February 2025
Revised: 16 March 2025
Accepted: 24 April 2025

EDITOR

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DATA AVAILABILITY

Upon reasonable request from corresponding author

FUNDING

Funding for this undergraduate research was received from the Department of Occupational Therapy at University of The Free State.

ISSN On-Line 2310-3833
ISSN Print 0038-2337

ABSTRACT

Introduction: South Africa is one of the top ten substance-abusing countries worldwide. South African literature vaguely defines intended occupational therapy interventions to address this problem and it is still unclear what interventions are applied in practice.
Aim: The study aimed to explore the intervention programmes South African occupational therapists follow when working with clients who struggle with substance-related and addictive disorders. Furthermore, it explored how occupational therapists select, motivate, and implement their intervention programmes.
Method: This quantitative exploratory study used a self-developed questionnaire that was distributed by discriminative snowball sampling. Occupational therapists across South Africa who treat substance-related and addictive disorders were requested to complete the questionnaire.
Results: Two-hundred-and-nineteen occupational therapists participated in this study. The participants provided a variety of evidence-based interventions focusing on social participation (n=169; 77.2%), leisure (n=169; 77.2%) and work (n=147; 67.1%). When selecting intervention methods, motivation (n=204; 93.2%), ethical reasoning strategy (n=142; 64.8%), Model of Creative Ability (VdTMoCA) (n=145; 66.2%) and cognitive behavioural therapy (CBT) (n=171; 78.1%) were identified as the main methods when selecting, motivating, and implementing intervention. Relapse prevention and aftercare received insufficient attention.
Conclusion: This study provides insight into the interventions South African occupational therapists use when treating substance-related and addictive disorders. The findings provide a basis to inform evidence-based interventions and outcomes.

Implications for practice

- This research study provides an understanding of occupational therapists' interventions for substance-related and addictive disorders in South Africa.
- The results can be used to determine the effectiveness of interventions done in South Africa to improve recovery outcomes.
- The results from the research study can be used as a source of literature for future studies.
- This study fills a gap in South African occupational therapy literature with regard to substance-related and addictive disorders.

INTRODUCTION

According to the United Nations Office on Drugs and Crime, 35 million people worldwide suffered from a substance-related and addictive disorder in 2018 and required some form of treatment[1]. Following the COVID-19 pandemic, these statistics have increased due to social isolation, loneliness, and major stress regarding personal finances and employment[2]. In the United States of America, the Overdose Detection Mapping Application Program found that suspected overdoses increased by 42% in May 2020, compared to May 2019[3].

South Africa is one of the top ten substance-abusing countries worldwide[4]. The COVID-19 pandemic had catastrophic effects on the South African healthcare system, society and economy[5]. However,

substance-related and addictive disorders have been an epidemic in South Africa long before the current crisis. Earlier statistics estimated that 13% of the general adult population in South Africa struggle with substance-related and addictive disorders [6,7], although, the true percentage is speculated to be significantly higher[8]. In the 2022 Census conducted in South Africa, drug/alcohol abuse was found to be the second leading cause of homelessness in the country which contributed to 25% of all homelessness cases[9].

Substance-related and addictive disorders are a mental health problem described in the Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-V), referring to the repeated and increased use of a substance of any sort, that may result in an urge continuously use the substance resulting in symptoms of distress, that may include physical and mental deterioration[10,11] if these substances are not consumed. Consequently, this can result in an individual's failure to fulfil their life role responsibilities at work, home, or school. These disorders have negative consequences on social participation, recreational activities, and activities of daily living, which may cause occupational imbalance and decrease a person's quality of life[12].

In South Africa, using or abusing substances is regarded as a norm in various cultures[13], which contributes to the increased prevalence of substance-related and addictive disorders in the country. Additional reasons for high substance use include the country's struggling economy, high levels of poverty, extensive interpersonal violence, a substantial gang presence and social inequality[14]. Despite the threatening situation of substance-related and addictive disorders in South Africa, treatment services are often perceived as ineffective and, unsustainable[15].

LITERATURE REVIEW

The need for occupational therapy intervention in substance-related and addictive disorders

Occupational therapists view participation in occupations as the key to health and well-being[19]. Substance-related and addictive disorders could be viewed as an occupation many people engage in; however, it does not promote health and well-being[20,21]. Literature suggests that discontinuing the use of a substance requires a shift in the individual's occupational identity from being an addict to that of being a recovering addict[22]. Occupational therapists can contribute to facilitating this shift by introducing occupation-based interventions that can elicit improvements in the recovery process[17]. During intervention, occupation can be used as a means and an end to achieve treatment outcomes.

Type of occupational therapy interventions described in the literature

Occupational therapists look at clients holistically and assess the impact of substance-related and addictive disorders on occupational performance[18]. The aspects they assess and treat include activities of daily living, instrumental activities of daily living, rest and sleep, education, work, play, leisure and recreation, and social participation[23]. Literature highlights that the occupations of work, leisure and recreation, and social participation are the most commonly addressed in treatment. Additionally, occupational therapists consider the client's performance patterns, cognition, motivation, and other bodily functions to ensure holistic intervention[17].

According to international literature, individuals recovering from substance-related and addictive disorders can benefit from treatment methods such as cognitive behavioural therapy (CBT), dialectical behaviour therapy (DBT), behavioural therapy, social network therapy, environment-based therapy and behavioural couples therapy[24,25]. Moreover, techniques such as role playing, mindfulness, motivational interviewing, relaxation therapy and group therapy can be valuable for individuals to prevent relapses and equip the client with coping strategies to return to daily occupations[24]. Group therapy is effective because occupational therapists can employ therapeutic factors such as installation of hope, universality, developing social skills, imparting information, interpersonal learning and altruism to encourage change[26].

Due to substance-related and addictive disorders being a chronic relapsing disease, relapse prevention forms an essential part of intervention. It focuses on the causes of addictive behaviours, which may be environmental, physical, situational or emotional in nature. The goal is to create a person-centred relapse prevention plan to support and promote sustaining abstinence[24]. The basis of relapse prevention is cognitive behavioural therapy, using behavioural skills training, cognitive interventions and lifestyle changes[24]. In addition, other methods to counteract relapse include support groups such as the 12-step programme[18].

In order to select which of the above interventions are the most applicable to their client, occupational therapists can use a variety of clinical reasoning strategies, models and theoretical frames of references as listed in Table I (below). A non-occupational therapy model that can be used to clinically reason is the Stages of Change model (Transtheoretical model). This model focuses on six stages that a person who is addicted to substances must go through in order to change their behaviour. According to the literature, it is important to focus on this model to understand where the occupational therapist's role is effective[18].

Table I: Models and theoretical frames of references used to guide intervention[27,28]

CLINICAL REASONING STRATEGIES USED TO GUIDE INTERVENTION	MODELS USED TO GUIDE INTERVENTION	THEORETICAL FRAMES OF REFERENCES
• Scientific reasoning strategy • Narrative reasoning strategy • Pragmatic reasoning strategy • Ethical reasoning strategy	• Canadian Model of Occupational Performance and Engagement (CMOP-E) • Person-Environment-Occupation-Performance Model (PEOP) • Model of Human Occupation (MOHO) • Kawa model • MOCA (Model of Creative Ability) • EHP (Ecology of Human Performance) • Transtheoretical model (Stages of Change model)	• Psychodynamic • Cognitive behavioural therapy (CBT) • Rational emotive behaviour therapy (REBT) • Behavioural • Client-centered • Community-based • Educational • Cognitive perceptual • Sensory integration • Biomechanical • Neurophysiological (The traditional and contemporary approach)

Occupational therapy intervention in the South African context

To understand the implementation of these interventions in South Africa, the already established treatment system should be described. Treatment programmes are regarded as ineffective and unsustainable with national relapse rates as high as 65% for users leaving treatment facilities[29], and thus not meeting the needs of those seeking intervention. Literature provides possible reasons for poor quality treatment. Firstly, users are often admitted for a primary psychiatric disorder, with a substance-related and addictive disorder merely noted as a comorbidity, leading to users not receiving substance-related and addictive disorders specific treatment. Secondly, with 40% of South Africa's population living in rural areas[13], the healthcare system lacks the ability to adequately address community health issues such as substance-related and addictive disorders. Literature shows that a community-based approach, specifically health promotion, has been effective in this context[30].

There is a need for a paradigm shift from that of the traditional disease model to a more holistic approach, which has the potential to maintain long-term recovery. Occupational therapy intervention is characterised by a holistic approach and therefore has a role in the recovery process. The literature review conducted demonstrates the theoretical basis of treatment in substance-related and addictive disorders internationally. However, the occupational therapy intervention process in South Africa (i.e., select, motivate, and implement) has not yet been described.

Problem Statement

Occupational therapy intervention has been reported to make use of occupation-based intervention which promotes recovery and therefore, occupational therapists have an essential role to play in the treatment process[17]. Occupational therapists can manage not only physical, psychological and emotional factors, but also contribute towards an enabling environment[18]. When consulting South African literature, the following problem was noted; literature found vaguely defined the occupational therapy interventions that South African occupational therapy apply in practise.

The South African research base for substance-related and addictive disorders treatment, especially occupational therapy treatment, is limited and current literature used to guide intervention is based almost exclusively on research conducted in non-African contexts[16]. Treatment programmes are said to be based on outdated, conservative strategies that are not holistic, contextually relevant, or adapted for the individual, causing a negative influence on treatment efficacy[15].

The findings of this study will not yet support any hypothesis, but rather lay a foundation to bridge the gap within the field of occupational therapy. By doing so, a road is paved for future studies to explore how these treatment interventions can be improved, in order to increase treatment efficacy, decrease relapses, and alleviate the burden on the South African healthcare system. Thus, the aim of this study was to determine the intervention programmes South African occupational therapists follow when working with clients who struggle with substance-related and addictive disorders. With four main objectives being 1. To determine the percentage of occupational therapists treating substance-related and addictive disorders in South Africa; 2. To determine what intervention programmes South African occupational therapists select when treating substance-related and addictive disorders; 3. To determine how South African occupational therapists motivate their choice of intervention programmes for substance-related and addictive disorders; 4. To determine how South African occupational therapists implement their intervention programmes for substance-related and addictive disorders.

METHODOLOGY

Study design

A quantitative exploratory research study design was employed, which aimed to establish the intervention programmes South African occupational therapists apply when working with clients who struggle with substance-related and addictive disorders.

Research population and sampling

In the year 2021, 8 808 occupational therapists were registered with the Health Professions Council of South Africa (HPCSA). The research population was found using exponential discriminative snowball sampling (a form of non-probability sampling). To be eligible to participate in this study, the occupational therapist had to be registered with the HPCSA; be practicing in South Africa; and must have treated substance-related and addictive disorders, either as a primary or secondary focus at any time in their years as a practicing occupational therapist in South Africa.

Measurement tool

The measurement tool was a researcher-developed, anonymous, online questionnaire that was developed in collaboration with a biostatistician guided by literature with a focus on substance-related and addictive disorders interventions, clinical reasoning in occupational therapy, occupation-based interventions, and assessment procedures[18,20,23,24].

The questionnaire consisted of three main sections; 1. Biographical information section, 2. Clinical practice section focusing on specific substance-related and addictive disorders intervention and 3. The occupational therapists' attitudes towards these types of intervention. Most of the questions in the questionnaire were in the form of closed-ended questions, although the participants were provided with "other boxes" where they could insert additional information. The questionnaire required approximately 10 minutes to complete and the time to complete was determined via a pilot study because there are a variety of validity-related issues that may arise when using a questionnaire, e.g., asking double-barrelled questions, asking leading questions, and not using simple language[31,32]. However, literature does provide counter measures to limit these errors, which were incorporated into the design of the questionnaire. The questionnaire was uploaded to EvaSys© (a web-based, University-approved survey tool) for distribution.

Before distributing the questionnaire to the study sample, a pilot study was conducted to test the feasibility of the study looking at the effectiveness of the research method and procedure[44]. The pilot study was also used to test the reliability and validity of the questionnaire[44]. The draft questionnaire (on EvaSys©) used for the pilot study was completed by five paediatric occupational therapists who were at the time registered with the HPCSA and practising in South Africa. These therapists were used because they understand occupational therapy processes, and their involvement would not take away from the main study participants. The pilot study participants provided feedback regarding the flow of the questionnaire, the language of the questions and if they were not ambiguous nor leading to desired responses, the time it took to complete the questionnaire, and the appropriateness of the occupational therapy terms and theory. To ensure content validity, the questionnaire had to contain very specific language (occupational therapy jargon) and treatment concepts found in literature. The researchers also believe the sections of the questionnaire were adequate, logical, and simple to follow. At the same time, no part of the questionnaire posed leading questions.

After incorporating the feedback from the pilot study participants, adaptations were made to the questionnaire. A cover letter, which was used in the final questionnaire, was also finalised, and designed according to guidelines in the literature[33]. Consent, the purpose of the questionnaire and other ethical aspects (e.g., autonomy, voluntary participation, and option to withdraw at any time) were explained and summarised in the cover letter. The cover letter included information about a Continued Professional Development (CPD) activity that the participants could access after completing the research questionnaire. The decision to include this CPD activity was to increase the response rate by offering an incentive for completing the questionnaire where the therapists could earn CPD points.

Sampling, data collection and analysis

The sampling methods that were used in this study were both purposive and snowball sampling. In purposive sampling, participants are selected with a specific purpose in mind and thus purposive sampling was used in this to select occupational therapists with the purpose of getting information that will answer the research question[44]. Snowball sampling is often used when researchers do not have access to all possible participants, and they ask participants they have identified to pass the study to other possible participants and thus distributing the study to a wider population and potentially increasing the response rate[45]. The questionnaire was distributed via various platforms to reach as many participants as possible. These included using the Occupational Therapy Association of South Africa (OTASA) to reach therapists registered with OTASA via their database, word-of-mouth to known therapists, and social media platforms such as Facebook, Instagram and WhatsApp. An advertisement and link to the questionnaire accompanied all distribution emails and social media posts. The questionnaire was available in English as this is the official language of communication used by OTASA and the HPCSA.

The questionnaire was available between 26 April 2021 and 14 May 2021. After this period, the data collected was submitted to the Department of Biostatistics at the University of [removed to ensure blind review] for data analysis. The assigned biostatistician determined descriptive statistics such as frequencies and percentages for categorical data.

Ethical considerations

Approval to perform this research was obtained from the Health Science Research Ethics Committee (HSREC) of the University of Free State (ethical clearance number: ***UFS-HSD2021/0118/2505***). The participants' participation in the study was voluntary and completing the questionnaire implied that they gave informed consent to participate in the study.

RESULTS

Of the 8 800 occupational therapists registered with the HPCSA in 2021, 219 participated in the study (response rate = 2.5%). The researchers believe that the survey tool is repeatable and will yield similar results when repeated under similar circumstances (reliability). EvaSys© is an accredited survey tool that is paid for by the University of Free State but other tools like Google Forms and Survey Monkey are equally suited for this purpose. The research team did consider all three of the above-mentioned tools but essentially decided on EvaSys© based on research expertise within the department of occupational therapy, University of the Free State. The research team also consulted closely with the Biostatistician on choice of survey platform.

In terms of content validity, the research team benefited from sending a draft survey to a pilot study population who were qualified occupational therapists with knowledge of occupational therapy theory, processes, and practice, but who were not directly involved in substance-related and addictive disorders treatment. Paediatric occupational therapists were selected for this purpose; however, any other group of occupational therapists could have been selected as long as they did not practice in substance-related and addictive disorders. This was done to separate trial/draft survey results from formal survey results (after pilot study). The researchers did not want any of the already small group of participants to repeat the survey as their responses might have been different when presented with the survey a second time or they would not have completed the formal survey at all, thinking that they have already done so previously. Results of the questionnaire are summarised in Tables II (below) and III (page 5). Substance-related and addictive disorders were treated as a primary focus by 26 (11.9%) of the participants, as a comorbidity by 105 (47.9%), and as both by 88 (40.2%) of the participants.

Most of the participants were situated in the Gauteng (n=96; 43.8%) and Western Cape (n=48; 221.9%) provinces where more than half (n=123; 56.2%) of the therapists practised in the private sector. One hundred and eighteen (118 - 53.9%) were younger than 30 years of age and 110 (50.2%) had less than 6 years' experience in practice. Participants mostly worked in acute facilities (n=96; 43.8%), where most of the clients were treated in an in-patient context (n=74/96; 77.1%) for a period of 2–4 weeks (n=43/96; 44.8%). The minority of participants (n=35; 16.0%) provided treatment in a community-based setting. Close to 60% (n=125; 57.1%) of departments or practices did not have a protocol specifying treatment interventions. However, 112 (51.1%) of all the participants had attained further training in treating substance-related and addictive disorders.

Table II. Clinical reasoning results

CLINICAL REASONING	
Variables	**n (%)**
Department/ practice specific protocol specifying treatment intervention of substance-related and addictive disorders (n= 193)	
Yes	81 (41.97)
No	112 (58.03)
Types of clinical reasoning strategies used to guide intervention (n=197)	
• Scientific	130 (66.0)
• Ethical	128 (65.0)
• Narrative	109 (55.3)
• Pragmatic	90 (45.7)
• Unsure	24 (12.2)
• Other	7 (3.6)

Theoretical frames of references used in substance-related and addictive disorders intervention (n=196)	
• Cognitive Behavioural frame of reference	155 (79.1)
• Health promotion	109 (55.6)
• Behavioural frame of reference	104 (53.1)
• Psychodynamic frame of reference	77 (39.3)
• Neurophysiological frame of reference	52 (26.5)
• Sensory Integration frame of reference	49 (25.0)
• Human developmental frame of reference	32 (16.3)
• Other	22 (11.2)
Occupational therapy models used in substance-related and addictive disorders intervention (n=197)	
• Model of Creative Ability	130 (66.0)
• Model of Human Occupation	92 (46.7)
• The Person-Environment-Occupational Performance Model	46 (23.4)
• No models used	42 (21.3)
• Kawa Model	23 (11.7)
• Canadian Model of Occupational Performance and Engagement	14 (7.1)
• Ecology of Human Performance Framework	10 (5.1)
Familiarity with the stages of change (trans-theoretical) model (n=196)	
• Yes	72 (36.7)
• No	124 (63.3)
Frequency of use of the stages of change (trans-theoretical) model (n=72)	
• Occasionally	37 (51.4)
• Frequently	18 (25.0)
• Never	17 (23.6)
Use of policies, laws and frameworks in treatment planning (n=198)	
• Other	70 (35.4)
• South African National Council on Alcoholism and Drug Dependence (SANCA)	66 (33.3)
• Prevention and Treatment of Substance-related and addictive disorders Act (70 of 2008)	52 (26.3)
• National Drug Master Plan (NDMP)	10 (5.1)

Table III: Intervention process results

THE INTERVENTION PROCESS	
Variables	**n (%)**
Occupational performance areas (OPAs) used as main focus in substance-related and addictive disorders intervention (n=196)	
• Social participation	151 (77.0)
• Recreation and leisure	151 (77.0)
• Work	137 (69.9)
• Personal independence (ASL & IADL*)	125 (63.8)
• Education	90 (45.9)
• Sleep and rest	79 (40.3)
The use of occupation as a means or as an end in substance-related and addictive disorders intervention (n=195)	
• Both	148 (75.9)
• As a means	28 (14.4)
• As an end	19 (9.7)
The use of performance patterns as focus of substance-related and addictive disorders intervention (n=194)	
• Yes	184 (94.8)
• No	10 (5.4)
Occupational performance components used as a main focus in substance-related and addictive disorders intervention (n=197)	
• ***Motivation: aspects of motivation***	183 (92.9)
➢ Ability to make decisions	*165 (83.8)*
➢ Using time constructively	*156 (79.2)*
➢ Internal motivation	*153 (77.7)*
➢ Sense of responsibility	*153 (77.7)*
➢ Handling postponement of satisfaction	*95 (48.2)*
➢ Showing interest in people, objects, and environment	*90 (45.7)*
➢ External motivation	*81 (41.1)*
➢ Shows initiative	*78 (39.6)*
➢ Other	*10 (5.1)*
• ***Cognitive: aspects of cognition***	162 (82.2)
➢ Insight	*178 (90.9)*
➢ Higher cognitive functions	*167 (84.8)*
➢ Judgement	*152 (77.2)*
➢ Concentration	*135 (68.5)*
➢ Memory	*110 (55.8)*
➢ Reality orientation	*89 (45.2)*
➢ Other	*21 (10.7)*
Variables	**n (%)**
• ***Affective: aspects of affect***	153 (77.7)
➢ Self-esteem	*168 (85.3)*
➢ Emotional control	*159 (80.7)*
➢ Attitude towards treatment	*123 (62.4)*
➢ Unpleasant emotions	*107 (54.3)*
➢ Range of emotions	*99 (50.3)*
➢ Relevance of emotions	*85 (43.1)*
➢ Other	*13 (6.6)*
➢ Sensory	49 (24.9)
➢ Motor	39 (19.8)
Treatment methods used when treating substance-related and addictive disorders (n=196)	
• Cognitive behavioural therapy	153 (78.1)
• Behavioural therapy	107 (54.6)
• Social network therapy	36 (18.4)
• Environmental-based therapy	36 (18.4)
• Other	27 (13.8)
• Behavioural couples therapy	5 (2.6)

Other treatment methods used when treating substance-related and addictive disorders (n=27)	
• Dialectical behavioural therapy	25 (60)
• Acceptance and commitment therapy	2 (5)
Intervention techniques used in the treatment substance-related and addictive disorders (n=194)	
• Stress management techniques	180 (92.8)
• Relaxation techniques	157 (80.9)
• Mindfulness	137 (70.6)
• Role playing	102 (52.6)
• Motivational interviewing	85 (43.8)
• Psychomotor activation	66 (34.0)
• Other	16 (8.2)
Methods used for substance-related and addictive disorders relapse prevention (n=189)	
• Lifestyle changes	155 (82.0)
• Problem solving techniques	134 (70.9)
• Cognitive behavioural therapy	110 (58.2)
• Mindfulness techniques	106 (56.1)
• Aftercare programme	75 (39.7)
• Behavioural skills	70 (37.0)
• Other	5 (2.6)
Therapeutic groups as treatment intervention (n=188)	
• Yes	150 (82)
• No	33 (18)

Types of groups facilitated as part of treatment intervention (n=157)	
• Activity groups	141 (89.8)
• Interpersonal skills groups	122 (77.7)
• Coping skills groups	121 (77.1)
• Recreation groups	104 (66.2)
• Intrapersonal skills groups	68 (43.3)
• Vocational rehabilitation groups	64 (40.8)
• Orientation groups	41 (26.1)
• Family groups	23 (14.6)
• Other	4 (2.5)
Involved in client or referrals to support groups (n=187)	
• Refer	86 (46.0)
• Neither	76 (40.6)
• Both	20 (10.7)
• Involved	6 (3.2)

*ADL & IADL, activities of daily living and instrumental activities of daily living.

DISCUSSION

Clinical reasoning used to select Intervention programmes when treating substance-related and addictive disorders

Clinical reasoning strategies

"Clinical reasoning is an essential part of the planning and performing strategies of occupational therapy used to control and monitor effective therapy" [27: 608]. It was found that the participants in the study use a variety of clinical reasoning strategies. According to findings shown in Table II (page 4), 58% (n=193) of participants did not have a set area specific treatment protocol for substance-related and addictive disorders in their practices and made use of various intervention methods in their practice. Additionally, 12.2% (n=24/197) of the participants reported they were unsure of what clinical reasoning strategy they used. Results further showed that participants followed a variety of national policies[34–36] to guide their reasoning.

Theoretical frames of reference

Internationally, the Cognitive Behavioural frame of reference is frequently and effectively used to clinically reason the treatment of substance use disorders[37]. Reassuringly, 79.1% of the participants in this used the Cognitive Behavioural frame of reference while 53.1% also used the Behavioural frame of reference to inform clinical reasoning. Furthermore, 55.6% of the participants also reported following the Health Promotion Framework in clinically reasoning and planning their intervention. With only 16% of the participants reporting to be practicing in a community setting, the importance of community-based intervention which incorporates health promotion was the discussed in the literature review and is necessary in the South African context[13]. Moreover, as rural communities are often misinformed about substance-related and addictive disorders treatment[38], health promotion should be a prominent part of treatment in these areas.

Models

According to international literature, the Model of Human Occupation (MOHO) is used as a guide to design intervention plans specifically when addressing mental health problems such as substance-related and addictive disorders[39]. This is evidenced by 47% of this study's participants reported that they use the MOHO in their intervention plans for their clients with substance related and addictive disorders. In addition to the MOHO, he Vona Du Toit Model of Creative Ability (VdTMoCA) is used highly by South African occupational therapists with

most of the participants, 66% using the VdTMoCA in their intervention plans. Literature is available regarding the use of VdTMoCAand mental health in the South African context[40]. However, no literature specifically discusses the use of the VdTMoCA when treating substance-related and addictive disorders. The Stages of Change model is regarded as important in South African literature to ensure multidisciplinary integration[18], although 63.3% of the participants were unaware of the model, as shown in Table II (page 4).

Implementation of intervention programmes

Occupations

As shown in Table III (page 6), it was found that most of the participants in the study (75.9%) used occupation both as a means and as an end when addressing substance-related and addictive disorders problems. This finding indicates that South African occupational therapists are versatile in their approach to treatment. The areas of occupation that the participants mostly addressed included social participation (77.0%), leisure and recreation (77.0%) and work (69.9%), which was similar to what occupational therapists addressed internationally[41]. Through addressing these areas of occupation, clients with substance-related and addictive disorders experience increased occupational engagement that facilitates replacement of the destructive patterns of occupational engagement caused by substance-related and addictive disorders. As a result, satisfactory occupational lives can be led[20]. Substance-related and addictive disorders encourage destructive behaviours due to its effects on motivation, cognition and affect which may lead to it being an occupation people engage in. The participants indicated that they addressed these aspects in intervention to restore healthy occupational engagement. Furthermore, many participants (95%) indicated that they also addressed performance patterns in their intervention to change behaviour as this is valuable when treating substance related and addictive disorders, which directly relates to the assumptions of the MOHO.

Treatment methods derived from theoretical frames of references

It was found that the majority of the occupational therapists employed specific methods within CBT (78%) and behavioural therapy (55%) in their intervention programmes. This is confirmed in the literature as these methods are beneficial in substance-related and addictive disorders recovery[24]. Additionally, some participants also used DBT (60%) as a treatment method in their practice. A minority (18.4%) of therapists used social network therapy; environment-based therapy (18.4%); acceptance and commitment therapy (5%); and behavioural couples' therapy (2.6%). Possible reasons for participants not using these methods could include that these methods are not applicable in the African context, or the therapists were unaware of them.

Relapse prevention

The data collected in this study showed that the key focus points during relapse prevention were lifestyle changes (82%) and problem-solving techniques (70.9%). Therefore, the relapse prevention methods used by participants corresponded with evidence-based methods reported in the literature[24]. However, these relapse prevention methods are developed in non-African contexts and do not necessarily account for individuals being discharged into communities ridden with poverty and gangsterism where substance-related and addictive disorders can be a culture or method of survival[15]. Furthermore, it is concerning that only 39.7% of the participants used aftercare programmes, as these programmes contribute to the prevention of relapse[42].

Therapeutic groups

As shown in Table III (page 6), a large percentage of occupational therapists used different types of group activities in the treatment of substance-related and addictive disorders, which was a positive observation. It was found that clients involved in group interventions experienced a lower relapse rate compared to those who received only pharmacological and individual treatment interventions[43]. Specifically, participants reported making use of activity groups (89.9%), interpersonal skills groups (77.7%), coping skills groups (77.1%), or they referred clients to support groups (46.0%) using 12-step programmes. One participant commented that teaching the individuals skills in a group setting (such as creative groups) could provide them with employment possibilities that could promote recovery.

Techniques

In this study, the majority of participants indicated that they used evidence-based techniques such as stress management (92.8%); relaxation (80.9%); and mindfulness (70.6%). Other techniques with proven efficacy, such as role playing, motivational interviewing and psychomotor activation, were commonly used by participants. The use of these techniques by occupational therapists in this study supports evidence-based treatment, improving the chances of outcomes being reached. However, these coping strategies and techniques are not sufficient in isolation, and intervention should still include finding purposeful, meaningful activities to restore life roles[24].

CONCLUSION

The data collected in this study identified a variety of evidence-based methods occupational therapists in South Africa use to select, motivate and implement substance-related and addictive disorders interventions. The participants in the study mainly used occupational therapy models such as the MOHO and VdTMoCA, as well as the cognitive behavioural theoretical frame of reference to select interventions and inform clinical reasoning. Additionally, it was found that the intervention methods commonly used by the participants included CBT, DBT and behavioural therapy. Techniques used by numerous participants to reach treatment outcomes included stress management, relaxation, and mindfulness techniques, as well as group therapy.

The participants used occupation as a means to address performance deficits, and as an end through improving engagement in constructive occupations. They also understood addiction as an occupation and its effects on occupational engagement. Thus, it was clear that the participants provided occupation-based interventions, which are essential in the recovery process of substance-related and addictive disorders. While findings suggest that South African occupational therapists employed some evidence-based interventions, insufficient focus was placed on relapse prevention methods such as aftercare and support groups. The methods currently used for relapse prevention are based on international literature and do not address the complexities found in South African communities.

The research findings give the researchers insight into which interventions South African occupational therapists apply when treating substance-related and addictive disorders. The unique contribution occupational therapists make in these interventions has been demonstrated in individuals' recovery and fostering healthy occupational engagement patterns. In conclusion, since the type of interventions South African occupational therapists use have been identified, it is up to individuals in this profession to use this knowledge to inform evidence-based treatment planning and improve treatment outcomes.

RECOMMENDATIONS

The researchers recommend the following based on the results of this study:

- It is recommended that facilities should develop and implement area specific treatment protocols for substance-related and addictive disorders intervention that are applicable to their practice.
- The researchers recommend that aftercare programmes for relapse prevention should be investigated. Further recommendations in this regard include that relapse prevention methods specific to the African context should be investigated and implemented to ensure context-specific intervention.

- It is recommended that the results of the study be used to inform undergraduate curricula to ensure the relevance of information being provided in a specific context.
- It is recommended that a follow-up study be conducted to investigate the effectiveness of determined methods used by occupational therapists in South Africa.
- Many of the participants commented that clients returned to environments and situations that counteract the interventions provided. Therefore, it is recommended that occupational therapists provide services in community-based settings – either directly (e.g., facilitating aftercare programmes) or indirectly (e.g., researching community-based interventions).

Limitations

- The researchers did not make responding to all the questions compulsory, causing a discrepancy in the number of participants who answered each question, as this allowed them to navigate to the CPD activity without having to respond to the questionnaire. As seen in Table III (page 6) and Table II (page 4), where participants omitted numerous questions continually throughout the questionnaire and thus not giving a full picture of their clinical practice.
- As no direct clinical observations were made and the questionnaire was completed online, one could not determine whether the results reflected the reality of what happened in practice.
- The sample size of this study could also limit the generalisability of the results in the South African context.
- Additionally, due to the innate limitations of quantitative studies, this study could not provide an in-depth understanding of the treatment interventions that occupational therapists provide from a subjective viewpoint (e.g., no interviews were done) and thus could not get in-depth information on how occupational therapists select, motivate, and implement their intervention for clients with substance related and addictive disorders.

The lack of published research available regarding occupational therapy treatment in substance-related and addictive disorders might have limited the comprehensiveness of the questionnaire.

Acknowledgements

The authors acknowledge all the occupational therapists who participated in the study and Dr Daleen Struwig, medical writer/editor, Faculty of Health Sciences, University of the Free State, for technical and editorial preparation of the manuscript.

Conflicts of Interest:

The authors have no conflicts of interests to declare.

Author contributions

All authors of this study involved in all the stages of this research from the conceptualisation of the study, protocol development, data collection, data analysis, writing of the article and submission for publication.

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