

Investigating the efficacy of meaning-centred therapy among a sample of individuals with substance use disorders

*Agberotimi, S.F., Oduaran, C.

Abstract

Objective: This study investigated the efficacy of meaning-centred therapy (MCT) in the management of substance use disorders (SUD) in Nigeria.

Methods: A pre-test post-test control group experimental study was conducted among young individuals with substance use disorders. Participants were purposively selected and randomly assigned to treatment (MCT) and control groups. Participants' mean age was 22.05 ± 2.14 years. Assessments of both groups were done at intake, immediately after completion of the therapy (which is 10-weeks), and at 1-month follow-up. Independent-sample t-test and one-way repeated measure of analysis of variance were used for analyses at 0.05 significant level.

Result: Individuals in the MCT group reported significantly lower substance use disorder symptoms compared to those in the control group. There was an overall significant difference between the SUD means of participants that received MCT at pre-test, post-test, and 1-month follow-up.

Conclusion: It was concluded that MCT provided effective treatment of substance use disorder among the Nigerian population; its utilization is therefore recommended.

Keywords: Meaning- centred therapy, Nigeria, experimental study, substance use disorders, SUD treatment

*Corresponding author

Agberotimi, S.F.

ORCID-NO: <http://orcid.org/0000-0002-5643-3249>

E-mail: femiagberotimi@gmail.com

Lifestyle Diseases Research Entity, North-West University, South Africa

Received: February 6, 2021

Accepted: April 12, 2021

Published: September 30, 2021

Research Journal of Health Sciences subscribed to terms and conditions of Open Access publication. Articles are distributed under the terms of Creative Commons Licence (CC BY-NC-ND 4.0). (<http://creativecommons.org/licenses/by-nc-nd/4.0>).

<http://dx.doi.org/10.4314/rejhs.v9i3.7>

Étude de l'efficacité d'une thérapie centrée sur le sens auprès d'un échantillon de personnes souffrant de troubles liés à l'utilisation de substances

***Agberotimi, S.F., Oduaran, C.**

Resume

Objectif: Cette étude a examiné l'efficacité de la thérapie centrée sur le sens (TCM) dans la gestion des troubles liés à l'utilisation de substances (SUD) au Nigeria.

Méthodes: Une étude expérimentale de groupe témoin pré-test post-test a été menée auprès de jeunes personnes souffrant de troubles liés à l'utilisation de substances. Les participants ont été choisis à dessein et assignés au hasard aux groupes de traitement (MCT) et de contrôle. L'âge moyen des participants était de $22,05 \pm 2,14$ ans. Les évaluations des deux groupes ont été effectuées à l'admission, immédiatement après la fin du traitement (qui dure 10 semaines) et à un mois de suivi. Un test t pour échantillon indépendant et une mesure répétée unidirectionnelle de l'analyse de la variance ont été utilisés pour les analyses à un niveau significatif de 0,05.

Résultat: Les personnes du groupe MCT ont signalé des symptômes de troubles liés à l'utilisation de substances significativement inférieurs à ceux du groupe témoin. Il y avait une différence globale significative entre les moyennes SUD des participants qui ont reçu le TCM au pré-test, au post-test et au suivi à 1 mois.

Conclusion: Il a été conclu que le MCT fournissait un traitement efficace des troubles liés à l'utilisation de substances parmi la population nigériane ; son utilisation est donc recommandée.

Mots-clés: Thérapie centrée sur le sens, Nigéria, étude expérimentale, troubles liés à l'utilisation de substances, traitement SUD

*Corresponding author

Agberotimi, S.F.

ORCID-NO: <http://orcid.org/0000-0002-5643-3249>

E-mail: femiagberotimi@gmail.com

Lifestyle Diseases Research Entity, North-West University, South Africa

Received: February 6, 2021

Accepted: April 12, 2021

Published: September 30, 2021

Research Journal of Health Sciences subscribed to terms and conditions of Open Access publication. Articles are distributed under the terms of Creative Commons Licence (CC BY-NC-ND 4.0). (<http://creativecommons.org/licenses/by-nc-nd/4.0>).

<http://dx.doi.org/10.4314/rejhs.v9i3.7>

INTRODUCTION

The problem of substance use is a major public health concern. Millions of people suffer from different debilitating illnesses or injuries resulting from the use of alcohol and other addictive drugs. In 2019 alone, about 35 million people suffer from substance use disorders that require treatment services (1). In Nigeria, evidence confirms an upsurge in the rate at which Nigerians aged between 15 and 64 years use substances in recent years (2). Furthermore, numerous harmful consequences including psychiatric problems, poor performance and drop out from school, cultism, antisocial and criminal behaviours, indiscriminate and unhealthy sexual behaviour, rape, and suicide are commonly associated with substance use among the youth (3, 4).

According to Viktor Frankl, the founder of logotherapy, people turn to substance use because they are experiencing an internal crisis of perceived sense of lack of meaning in their lives. He termed the situation existential vacuum and said that individuals with substance addiction are drawn into the problem because they found psychoactive substance as a means to deal with boredom (inner void) and their meaningless life (5).

Meaning in life refers to the general sense of purpose and significance an individual has about his/her life and that directs his/her course of actions in life (6). The impact of meaning in life on the overall subjective wellbeing and mental health has been established by several scholars (7, 8). In this respect, lack or poor sense of meaning in life is consistently reported as a predictor of unhealthy behaviours such as substance use (9, 10). In a similar vein, the literature indicated that there is a higher chance that young people who find it difficult in finding meaning in their lives would end up with substance use disorder (11, 12).

Consequently, scholars have identified the important role of meaning enhancing therapies in treating substance use disorder (13, 14). Wiklund (15) noted that because of the experience of lack of meaning in life or difficulties discovering meaning that is common among individuals with substance use disorder, helping such individuals find meaning in life will contribute immensely to the individuals' treatment and recovery from substance use disorder. Thompson (16) also argued that meaning-centred therapy (MCT) makes a significant contribution in the treatment of SUD because patients are assisted during treatment to

discover meaning in their lives and establish new goals which will help them stop substance use and motivate them to remain committed to treatment goal and abstinence thereafter. Furthermore, exposing clients to meaning-discovering oriented activities early in the treatment has been established as a crucial way to enhance treatment adherence and positive outcome (16, 17, 18, 19). In this vein, Asagba (9) reported that logotherapeutic interventions are successful in helping people with substance use disorders attain abstinence and life-fulfilling life.

Similarly, it has been suggested that complementing usual treatment of substance use disorder with meaning-centred intervention will lead to improving treatment outcome, asserting that individuals with a high sense of meaning in life are more likely to respond better to substance use disorder treatment and more likely to maintain abstinence after treatment. The authors further argued that having a sense of meaning in life increases one's ability to handle stress, overcome life challenges and maintain healthy mental and physical wellbeing (20). Ameli (13) had earlier asserted that logotherapy (a meaning-centred therapy) and CBT share certain techniques in common and therefore argued for the integration of the concepts and techniques of logotherapy with CBT for enhanced therapeutic outcome in the clinical setting. Integrating logotherapy with CBT is believed to be a worthy challenge because it could add value at all levels: client's motivation and well-being, therapeutic process efficiency, effectiveness, and relapse prevention (13).

In this regard, helping patients with cocaine dependent develop higher sense of life purpose is an important and helpful aspect of their treatment (20). Similarly, receiving treatment for increasing meaning in life is significant in attaining abstinence for smoking (21). In essence, evidence for the efficacy of meaning-centred therapy in the treatment of substance use disorder is impressively increasing. Musavimoghadam, et al (22) reported that administering group logotherapy to drug addicts who presented with depressive symptoms resulted in a significant reduction of their symptoms when compared to another group who were not exposed to the treatment. In a study among patients receiving treatment for SUD at a residential treatment facility in Nigeria, logotherapy was found effective in reducing SUD symptoms and preventing relapse (23).

Theoretical framework: Frankl's Phenomenological Assumptions and the Will to Meaning

According to Frankl (5), there are three fundamental phenomenological assumptions through which logotherapy is understood and applied. First is freedom of the will, second is described as the inquisitive nature of man to gain understanding of situations, and the third has to do with the purpose of existence. The first describes an individual's opportunity to freely decide how to react to life conditions and situations of life; it however does not imply that one will not be faced with life conditions/circumstances. The will to meaning, or want to comprehend the reason for personal particular life, constitutes essential inspiration of mankind in the Franklian framework (24). He considers it to be more fundamental than even the want for pleasure or the want to maintain a strategic distance from pain. Frankl further asserted that human, dissimilar to other creatures, will even forfeit delight to experience torment if it is viewed as containing an extraordinary significance because of someone else or for a reason to which one is committed (24). On the last note, meaning in life is considered as primary request places on us by the environment. Part of Frankl's very essential postulations is that it is not the man who demand meaning from life, however, life itself charges man to identify what is of significance and meaning. He explains: "One ought not to look for vague conceptual significance of life".

Frankl (5), believed addiction is part of the Neurotic Triad including aggression, depression, and addiction. The neurotic triad which is also called existential neurosis is because of frustration in discovering meaning in life followed by untreated state of meaninglessness. Koob (25) also opined that "Sucht" (Addiction) originates from "Sehnsucht" (desire). In this way, 'addiction' originates from looking to 'add' something to one's life', be it excitement, quietness, joy, flow, freedom from unsettling influence and so on.

Aim and Hypotheses

Despite the established obvious relationship between meaning in life and substance use, and evidence for the effectiveness of meaning-centred therapy in the treatment of substance use disorders, only a few studies addressing this relationship have been reported. Also, this promising line of treatment (meaning-centred therapy) is unpopular and underutilized

in Nigeria. This study, therefore, aimed to investigate the efficacy of meaning-centred therapy (MCT) in the treatment of substance use disorders among young persons in Nigeria.

In addressing the study aim, the following hypothesis was stated:

1. Individuals who receive meaning-centred therapy will report significantly fewer substance use disorder symptoms at post-test, and 1-month follow up compared to those in the control group that did not receive any treatment.
2. Participants in the treatment group will report significantly lower SUD at post-test and 1-month-follow up than they did at the pre-test.

MATERIALS AND METHODS

Design

A pre-test post-test control group design was used comparing treatment (MCT) group with a control group. Both groups were pre-tested on the measure of substance use disorder and then post-tested after the treatment conditions have been administered after ten weeks. To assess the stability of the effect of MCT, both groups were tested at a 1-month follow-up.

Participants

Participants were recruited from individuals attending the Drug Rehabilitation Unit of a teaching hospital in Ogbomoso, Nigeria. To be included in the study, participants must be a user of at least one psychoactive substance, and understand and able to communicate in the English language. Those who met the inclusion criteria and consented to participate in the study were recruited. Nineteen (19) individuals comprising of 16 males and 3 females, with an age range between 18 and 24 years ($M = 22.05$, $S.D. = 2.14$) purposively selected were randomly assigned to the study groups, with 10 individuals in the treatment group, and 9 individuals in the control group.

Instrument

The DSM-5 Diagnostic Checklist for Substance Use Disorder was used to assess symptoms of substance use disorders among the participants. This is an 11-item scale that combined items on both substance abuse and dependence in making substance use disorder according to the revised DSM-5 (APA, 2013). This checklist is a widely accepted and used measure of substance use disorder with strong psychometric properties. The scale yielded a

strong reliability coefficient of alpha 0.809 in this study.

MCT Module - Group Meaning-Centred Therapy

The group meaning-centred therapy applied the logotherapeutic approach to developing clients' emotional and noetic/spiritual dimension of their being for capacity for self-discovery, self-detachment, realizing one's uniqueness, making choices, realizing one's responsibility, and self-transcendence (reaching beyond self towards others/meaningful tasks).

The logotherapeutic techniques were used to enhance four treatment goals:

- Self-distancing symptoms
- Modification of attitudes
- Reduction of symptoms
- Orientation towards meaningful activities and experiences

The group meaning-centred therapy as an input target for the experimental group was conducted through a 10-session module based on suggestions in the book "man's search for meaning" written by Victor Frankl (5), Meaningful Living by Lukas (26), and Logotherapeutic approach to the management of persons with substance abuse/dependence by Asagba (9), and Asagba and Marshall (14).

Procedure

We recruited participants for the study from individuals attending the Drug Unit of a tertiary hospital in Ogbomoso, Nigeria. Only those that met the inclusion criteria of this study and are on the waiting list to commence treatment were purposively selected. All the potential participants were administered the study informed consent form, and those that willingly consented to participate were eventually selected. The informed consent contained all necessary information about the study, including the purpose, procedure, potential risks and benefits. Participants were randomly assigned into two groups – the experimental group which received 10-sessions of MCT, and the control group which did not receive any treatment in the study. The MCT was conducted by the lead researcher who is a trained clinical psychologist with training and core skills in meaning-centred therapy. The therapy was conducted following group therapy procedure. Furthermore, content and administration of the MCT delivered were assessed and supervised by a Professor of Psychology and Diplomate Clinician in Logotherapy. Assessments were done through a

self-report questionnaire at intake, 10 weeks post-intervention, and one-month follow-up intervals. Participants were instructed not to share information about their various group activities while the study last. Data were analysed with an independent sample t-test and one-way repeated measure analysis of variance.

RESULTS

Hypothesis One

The stated hypothesis indicated that participants that were administered MCT will report significantly fewer substance use disorder symptoms at post-test and 1-month follow-up than at pre-test compared to those in the control group. The hypothesis was tested with an independent sample t-test.

The result in Table 1 showed that there was no significant difference in the substance use disorder symptoms reported by participants in the treatment group (5.44) and control group (5.54) at the pre-test [$t(17) = -0.31, p = 0.76$]. However, after exposing participants in the treatment group to MCT, the results showed that there was a significant difference in substance use disorder symptoms, with the treatment group scoring significantly lower mean score (3.00), as compared to the control group mean score (4.30) at the posttest [$t(17) = -2.38, p = 0.03$]. Similarly at 1-month follow-up, participants in the intervention group reported significantly lower substance use disorder symptoms ($M = 3.22$) compared to those in the control group ($M = 4.50$) [$t(17) = -2.86, p = 0.01$]. The stated hypothesis was therefore accepted.

Hypothesis Two

Hypothesis two which stated that participants that received MCT will report significantly lower substance use disorder symptoms after treatment and follow-up than before treatment was tested with one-way repeated measure ANOVA.

The results presented in Table 2 indicated that there was an overall significant difference between the SUD means of participants that received MCT at the different time points i.e. intake, 10-weeks post-test, and 1-month follow-up ($F(2,16) = 16.676, p < .01$).

The results of the Bonferroni post hoc test in Table 3 and Figure 1 revealed the points and specificity of the differences in SUD that occurred. It was shown that there was a significant difference in SUD between post-test and pre-test ($p < .01$), and between 1-month follow-up and pre-test ($p < .05$), but no significant difference between 1-month follow-up and post-

test ($p > .05$). Participants that received MCT reported lowest level of SUD at post-test ($M = 3.00$), followed by a 1-month follow-up ($M = 3.22$). This implies that periodic exposure to the contents of MCT may be necessary to maintain the effect of treatment.

DISCUSSION

The present study investigated the efficacy of meaning-centred therapy (MCT) as a treatment for substance use disorder in Nigeria. It was established from our findings that meaning-centred therapy is effective in the treatment of substance use disorders. At the end of the treatment, participants in the treatment group reported significantly fewer SUD symptoms than those in the control. This implies that meaning-centred therapy made a significant contribution to treatment resulting in improved outcomes. Our finding was in line with previous studies reporting the efficacy of meaning-centred therapy in the treatment of substance use disorder (14, 20, 22, 23). Thompson (16) reported that meaning-centred therapy makes a significant contribution in the treatment of SUD because patients are assisted during treatment to discover meaning in their lives and establish new goals which will help them stop substance use and motivate them to remain committed to treatment goal and abstinence thereafter. Obi-Nwosu, *et al* (23) in their study among patients receiving treatment for SUD at a residential treatment facility in Nigeria also reported that logotherapy was effective in reducing SUD symptoms and relapse prevention.

Furthermore, the results showed that compared to those in the control group, participants in the treatment group reported more significant symptoms reduction at post-test and follow up. This indicates the stability of the MCT on effect SUD treatment in the participants. This finding aligns with the assertion of Ameli (13) that integrating the concepts and techniques of logotherapy with CBT will not only improve the effectiveness and efficiency of the therapeutic process but will improve the well-being of clients and assist them to maintain abstinence after active treatment engagement. In a similar study by Musavimoghadam, *et al* (22), administering group logotherapy to drug addicts who presented with depressive symptoms resulted in a significant reduction of their symptoms when compared to another group who were not exposed to the treatment.

CONCLUSION

It was demonstrated from the findings of the present study that MCT is effective in the treatment of substance use disorder among the Nigerian youths. This being a pilot study, we, therefore, recommend a replicate of this study among a larger sample to validate the findings of this present study. This is a move towards a multi-modal treatment approach which has been found effective in providing better treatment outcomes.

Limitations of the study: One of the identified limitations of this study is that the researchers could not rule out the possibility of participants sharing information about activities in their various groups to participants in other groups. This could be a source of confounding variable which the researcher could not control because the researcher could not have confined the study participants in different secluded places just for the study. Nevertheless, this study is not without some strengths which include randomization in sampling, and the assignment of participants to groups in the experimental phase of the study.

Ethical Consideration: Our study accords with the ethical standards of the national health research committee, the institutional research committee, and the 1964 Helsinki ethical declaration, its later amendment, or a comparable standard. Ethics clearance with reference number NHREC/12/04/2012 was obtained from Bowen Teaching Hospital ethical committee, and appropriate informed consent documentation protocol was followed. All respondents consented that their data should be used for this research.

Conflict of interest statement: The authors report no conflict of interest.

REFERENCES

1. UNOD. World Drug Report. Geneva, UNODC. 2019. Retrieved from <https://wdr.unodc.org/wdr2019/29/04/2020>
2. United Nations Office on Drugs and Crime. Drug Use in Nigeria, Geneva, United Nations Office on Drugs and Crime, 2018.
3. Peltzer K, Pengpid S. Cannabis and amphetamine use and associated factors among school-going adolescents in nine African countries. *Journal of Child and Adolescent Substance Abuse*. 2018; 27: 112-118. <https://doi.org/10.1080/1067828X.2017.1420512>.
4. World Health Organization. *Global status report on alcohol and health*. World Health Organization, 2018

5. Frankl VE. Man's search for meaning: Revised and updated. New York: Washington Square. 1985 (Original work published 1959)
6. Reker GT, Peacock EJ, Wong PTP. Meaning and purpose in life and well-being: A life-span perspective. *Journal of Gerontology*. 1987; 42(1): 44-49. <https://doi.org/10.1093/geronj/42.1.44>
7. Krause N, Hayward RD. Religious involvement and feelings of connectedness with others among older Americans. *Archive for the Psychology of Religion* 2013; 35(2): 259-282. <https://doi.org/10.1163/15736121-12341266>
8. Mascaro N, Rosen D. Assessment of existential meaning and its longitudinal relations with depressive symptoms. *Journal of Social & Clinical Psychology*. 2008; 27(6): 576-599. doi:10.1521/jscp.2008.27.6.576
9. Asagba RB. Logotherapeutic Management of Persons with Substance Abuse/Dependence. *Ifè Psychology in Africa*. 2009; 17(1): 89-98.
10. Hart K, Carey T. Ebb and flow in the sense of meaningful purpose: A lifespan perspective on alcohol and other drug involvement. In A. Batthyany & P. Russo-Netzer (Eds.), *Meaning in positive and existential psychology*, 347-413. New York, NY: Springer, 2014. https://doi.org/10.1007/978-1-4939-0308-5_20
11. Csabonyi M, Phillips LJ. Meaning in life and substance use. *Journal of Humanistic Psychology* 2020; 60(1): 3-19.
12. Schnetzer L, Schulenberg S, Buchanan E. Differential associations among alcohol use, depression and perceived life meaning in male and female college students. *Journal of Substance Use*. 2013; 18(4): 311-319. <https://doi.org/10.3109/14659891.2012.661026>
13. Ameli M. Integrating Logotherapy with Cognitive Behavior Therapy: A Worthy Challenge in A. Batthyány (ed.), *Logotherapy and Existential Analysis*, Logotherapy and Existential Analysis: Proceedings of the Viktor Frankl Institute Vienna, 2016. https://doi.org/10.1007/978-3-319-29424-7_18
14. Asagba RB, Marshall M. The use of logotherapeutic techniques in the identification and intervention stages of treatment with persons with substance use disorder. *African Research Review Journal*. 2016; 10(3,42): 39-54. <https://doi.org/10.4314/afrrrev.v10i3.3>
15. Wiklund L. Existential aspects of living with addiction—Part II: Caring needs, a hermeneutic expansion of qualitative findings. *Journal of Clinical Nursing*. 2008; 17(18): 2435-2443. <https://doi.org/10.1111/j.1365-2702.2008.02357.x>
16. Thompson G. A meaning-centered therapy for addictions. *International Journal of Mental Health Addiction*. 2012; 10:428-440.
17. Flora K, Stalikas A. Factors affecting substance abuse treatment in Greece and their course during therapy. *Addictive Behaviors*. 2012; 37: 1358-1364.
18. Lyons G, Deane F, Caputi P, Kelly P. Spirituality and the treatment of substance use disorders: An exploration of forgiveness, resentment and purpose in life. *Addiction Research & Theory*. 19: 459-469.
19. Martínez E. *Preparándome para superar la adicción: Manual para aumentar la motivación para el cambio en adolescentes con problemas de adicción*. Bogotá: Editorial CAA. 2013
20. Martin RA, Mackinnon S, Johnson J, Rohsenow DJ. Purpose in Life Predicts Treatment Outcome Among Adult Cocaine Abusers in Treatment. *Journal of Substance Abuse Treatment*. 2011; 40: 163-188.
21. Steger MF, Mann J, Michel SP, Copper T. Meaning in Life, Anxiety, Depression and General Health among Smoking Cessation Patients. *Journal of Psychosomatic Research*. 2009; 67: 353-358.
22. Musavimoghadam SR, Rokni SM, Pourmand Z. Logo therapy effectiveness and spiritual orientation on reducing the symptoms of depression. *Journal UMP Social Sciences and Technology Management*. 2015; 3(2): 594-600.
23. Obi-Nwosu H, Baleguel N, Nwafor CE, Onyemaechi C. Effects of Logotherapy and Rational Emotive Behavior Therapy (REBT) on Tendency to Relapse among Substance Abusers. *Practicum Psychologia*. 2019; 9(1): 187-205.
24. Frankl VE. *The Feeling of Meaninglessness: A Challenge to Psychotherapy and Philosophy* (Alexander Batthyany, Ed.). Milwaukee: Marquette University Press, 2010.
25. Koob GF. The role of the striatopallidal and extended amygdala systems in drug addiction. *Annals of the New York Academy of Sciences*. 1999; 877(1): 445-460.
26. Lukas E. *Meaningful Living; A Logotherapy Guide to Health*. The Institute of Logotherapy, Berkeley, CA, USA, 1986.

How to cite this article:

Agberotimi, S.F., Oduaran, C. Investigating the efficacy of meaning-centred therapy among a sample of individuals with substance use disorders. *Research Journal of Health Sciences*, 2021, 9(3): 264-272

Session Goal	Main points
Session One: Introduction and familiarization to the programme	Participants were introduced to the group, and the purpose and modality of the of the 10-intervention session were explained.
Session Two: Psycho-education - Introducing Logotherapy	The three pillars of logotherapy - will to meaning, freedom of will, and meaning of life were explained to the group members. Important terms such as existential frustration, existential vacuum and noogenic neurosis were also explained.
Session Three: Conceptualizing substance use disorder in terms of logotherapy	Participants were guided to express their problem of SUD. The researcher explained how SUD is conceptualized in logotherapy.
Session Four: Overcoming the Curiosity Drive	Issues regarding curiosity including risk-taking tendencies of the youths and how it relates to development and maintenance of substance use disorders were discussed with the group members. Psycho-education to correct favourable attitudes about drugs based on misconceptions and myths of psychoactive substances were discussed. Socratic dialogue was used to challenge the unhealthy beliefs participants hold about psychoactive substances.
Session Five: Dealing with boredom	Relationship between boredom and meaning orientation was discussed with the participants. Group members were guided in discussion on getting meaning from creation of values and responsibilities.
Session Six: Building confidence for social interaction and task performance	SUD development and maintenance as response to low capacity for self-acceptance and unhealthy way of responding to "sufferings" was discussed with the group. Finding meaning in every situation, and developing healthy attitude was discussed. Frankl's statement of "he who knows why can like through any how" was used in philosophical/Socratic discuss.
Session Seven: Developing positive self-esteem	Participants were helped to understand how low/no sense of meaning from relationship, values, aesthetic, and nature could lead to developing poor self-concept. Experiential sources of meaning: love, positive body image, sense of vitality was explained.
Session Eight: Overcoming peer pressure	This module taught participants how to develop capacity for freedom orientation, choice and responsibility. Through Socratic dialogue participants were helped to begin "re-discovering" and seeing themselves objectively, which account for acknowledgment that they can settle on their own decisions and they are in charge of for these. Helping them become aware of their sense of responsibility.
Session Nine: Coping with negative emotions	Participants were taught strategies for self-distancing from their symptoms in order to objectively deal with their problems rather than being blinded by addiction. Participants were educated about paradoxical intention concerning what it is and how it functions. In furtherance, members were guided to applying the technique to each individual's unique presenting complaint.
Session Ten: Summary	Summary of the sessions: speaking of what has been learned in the group.

Table 1. Changes in Substance Use Disorder Symptoms Between Intervention and Control Groups Before, After Exposure to MCT and at 1-month Follow-up.

	Intervention Mean (SD)	Group	Control Mean (SD)	Group	t (17)	P
Pretest	5.44 (1.67)		5.54 (1.78)		-.31	.76
Posttest	3.00 (1.12)		4.30 (1.25)		-2.38	.03
1-month follow-up	3.22 (1.20)		4.50 (0.71)		-2.86	.01

MCT (Independent Variable)

SUD (Dependent Variable)

Table 2. One-way ANOVA for repeated measures of SUD at pre-test, post-test, and 1-month follow-up

Source	Sum of Squares	Df	Mean Square	F	p	η_p^2
Time	32.889	2	16.444	16.676	<.01	.676
Error time	15.778	16	.986			

Table 3. Pairwise Comparisons of SUD at pre-test, post-test, and 1-month follow-up

(I) time	(J) time	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
Pre-test	Post-test	2.444*	.503	.004	.927	3.962
	1-month Follow-up	2.222*	.572	.014	.497	3.947
Post-test	Pre-test	-2.444*	.503	.004	-3.962	-.927
	1-month Follow-up	-.222	.278	1.000	-1.060	.615
1-month Follow-up	Pre-test	-2.222*	.572	.014	-3.947	-.497
	Post-test	.222	.278	1.000	-.615	1.060

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.