The Mediating Role of Depression on the Relationship Between Personal Resources and Recovery Motivation Among Individuals with Drug Abuse Problems

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ABSTRACT

This study aimed to investigate the relationship between personal resources, depression, recovery motivation, and the mediating role of depression among drug abusers. It samples 50 individuals identified with drug abuse problems aged between 16 to 35 years who participated in a treatment programme for drug abuse problems in Cure and Care Rehabilitation Centres. Data were collected through a self-report questionnaire using five instruments: The Patient Health Questionnaire (PHQ), Rosenberg Self-Esteem Scale (RSES), Alcohol Abstinence Self-Efficacy Scale (AASE), The Life Orientation Scale (TLOS), and Commitment to Sobriety (CSS). Data were analysed through SPSS 23 and Partial Least Square-Structural Equation Modelling (PLS-SEM). In the path model, the results demonstrate that personal resources are significantly associated with depression. The finding indicates the significant reciprocal relationship between depression and recovery motivation. The results of this study also reveal the importance of depression in mediating the relationship between personal resources and recovery motivation. This study proposes that high levels of depression could potentially decrease the possibility of recovery motivation in an individual. It can also be concluded that a significant relationship exists between personal resources, depression, and recovery motivation, with depression as a mediator among individuals with drug addiction. These findings imply that mental health issues should also be considered in the treatment plan for people with drug abuse so an individual's resources can be maximised and their recovery motivation enhanced.

Keywords: Depression, drug abuse, motivation, optimistic, recovery, self-efficacy, self-esteem

INTRODUCTION

Prolonged substance usage is a public health crisis (Ali & Sigalla, 2017). Substance abuse consumes a figure of a half trillion dollars in one year in remedial, financial, felonious, and social costs, causing over 100,000 deaths in the USA. The treatment of drug addicts is associated with a decrease in substance intake and illegal activities, betterment in work-related activities, and improvement in socio-psychological well-being. This socio-psychological well-being relies on the recovery motivation of the former addict during his/her treatment. For decades, researchers, scholars, and healthcare practitioners have been concerned about the factors associated with increasing the recovery motivation among drug abusers during their treatment. Recovery motivation is an individual's internal will and consistency to resist drug intake and criminal activities (Chen, 2018).

When former addicts become motivated to withdraw from drug abuse, they normally develop new behavioural mechanisms (Duckworth et al., 2016; Galla & Duckworth, 2015). This new behavioural mechanism potentially helps them to promote health and different approaches to circumvent indications that appeal to signal behaviour (Brevers et al., 2018). An exploratory study on motivational recovery found that personal factors were linked to recovery (Chan et al., 2019; Grodin et al., 2019). These personal factors refer to the psychological state of a former addict. Among others, as a personal resource, self-efficacy is the most significant recovery indicator among drug addicts

during treatment. Previously, motivation and self-efficacy were discovered as significant determiners in reducing heavy drinking behaviour among former addicts seeking brief temperance objective treatment (Morgenstern et al., 2016). It is suggested that special consideration should be given to improving self-efficacy in establishing intervention strategies (Tatum & Houston, 2017). According to Locke and Bandura's (1987) social cognitive theory, the treatment of self-efficacy may improve a person's self-esteem, which subsequently contributes to achieving certain goals (Bandura, 2002). Furthermore, it is believed that self-esteem and optimistic behaviour are the key components in examining the extent of motivation a former addict has for recovery during the treatment (Mokuolu & Adedotun, 2020). The more a former addict is confident in normalising his/her behaviour, the higher his/her motivation to recover.

Personal resources increase optimistic behaviour for recovery motivation, which is also a significant predictor. Woldgabreal et al. (2016) proposed a model in which they shed light on the understanding of self-efficacy, confidence, and optimistic behaviour in improving one's motivation to normalise one's behaviour. In Malaysia, Razali and Madon (2020) examined the factors that influence the likelihood of relapse among former addicts, and they indicated that problem-focused coping, emotion-focused coping, avoidance coping, and self-efficacy play a role in recovery programme success. Wang et al. (2019) explain that optimism heightens people's

motivation to achieve goal-oriented behaviour. The constructs play a significant role in increasing recovery motivation among former addicts. However, a growing body of literature is also concerned about another major psychological entity that may affect the recovery process. This psychological entity is depression. A mental health problem often comes into play because of declining confidence in life and losing interest.

An array of literature emphasised the importance of personal resources, which include optimism, self-efficacy, self-esteem, and depression that either increase or decrease the recovery motivation among former addicts during their treatment in various rehabilitative centres. Several studies have been conducted in Malaysia, for instance, a study on family support and hope for former addicts (Ghani et al., 2018; Razali et al., 2021). However, there were no conclusive findings in previous literature regarding the role of personal resources on recovery motivation and the mediating role of depression among former addicts in Malaysia. Therefore, the present study aimed to highlight research loopholes, identify new horizons, and explain the importance of personal resources in recovery motivation. Personal resources refer to the psychological state of a former addict. Meanwhile, motivation is self-determination to adopt positive behaviour and integrate a person's behaviour and activity. In such a situation, high motivation is directly linked to higher chances of recovery (Grodin et al., 2019).

This view is supported by Linke et al. (2013), who conceived and discussed the assumptions of relapse prevention theory, which direct that one should improve one's self-efficacy to live a healthy lifestyle. Self-efficacy improves the recovery process during drug-rehabilitative treatment, and higher self-efficacy leads to a lower risk of relapse for a former addict. Hence, recovery motivation is positively associated with the self-efficacy of addicts during treatment. This association highly predicts the probable outcomes of the treatment. Furthermore, among all the personal factors, optimism significantly encourages positive outcomes in an individual's behaviour (Rajabi & Salmanpour, 2019). These outcomes are reflected as the consequence of constant, general, and intrinsic determiners. Consequently, Mokuolu and Adedotun (2020) indicate that optimism and belief in one's abilities and strengths will update one's behaviour, which he had designated self-esteem. Suppose a person has poor self-esteem, self-efficacy, and optimism, there is a higher risk for the person to suffer from severe depression, which may slow down the recovery process during treatment.

Studies posit that the incidence of various life events is a dependable factor in developing depressive signs (Best et al., 2016). For instance, lack of support, empathy, loss of a loved one, stress, and failure could result in depression. Ghani et al. (2018) describe that drug rehabilitation requires the willingness of a former addict to leave the addictive behaviour and then acquire internal and external strong points

to endure pain while battling addiction. This situation can cause depression as addicts try to counter drug intake and thwart setbacks. However, Tatum and Houston (2017) found that empirical evidence did not clearly outline the relationship between depression and recovery motivation. According to the reformulated theory, negative events, and internal stability lead to a greater probability of depression. Produced hopelessness due to depression leads to a bad self-image and a sense of worthlessness that bring about feelings of demonisation towards normalisation and reduces recovery motivation (Liu et al., 2015).

Gunn and Samuels (2020) stated that recovery motivation is fundamental to numerous life revolutions, comprising transformations from drug abuse to recovery during treatment post-internment. This elusive task is bewildering and generally comprises comparable changes in any individual's crucial associations. According to Rajabi and Salmanpour (2019), optimistic behaviour is an important predictor of adapting to life events. Of all the determiners and fundamentals leading to an established and higher recovery motivation, the intrinsic and personal procedure should not be ignored. This complication can be generalised to all sorts of human behaviours and traits. Furthermore, perceived self-efficacy decreases the symptoms of depression, anticipates reticence, and influences behavioural consequences as well as an addict's motivation and struggles for coping with numerous conditions

by enhancing aspirations of successful treatment. In comparison, higher self-esteem is highly linked to a decrease in depression and an increase in recovery motivation (Kitinisa, 2019).

According to the World Health Organization (WHO; 2019), mental health problems, especially depression, are projected to increase by 50% by 2030. The prevalence of mental health and behavioural problems is because many consider drug use an alternative to escape problems of stress, worry, and depression (Subramaniam et al., 2018). Depression is also caused by genetic factors inherited from their parents (Wickersham et al., 2020). It means depression is a biological factor that influences the neurochemical activities in the human brain (Skóra et al., 2020; Wangdi & Jamtsho, 2019).

This study investigated the relationship between personal resources, depression, and recovery motivation among former addicts during treatment and analysed the mediating role of depression between personal resources and recovery motivation among former addicts. In line with the evidence offered by previous literature, the following hypotheses were formulated:

H1: There is a relationship between personal resources and depression.

H2: There is a relationship between depression and recovery motivation.

H3: Depression mediates the relationship between personal resources and recovery motivation.

METHODOLOGY

Participants

A cross-sectional data technique was executed to measure the study's objective. The questionnaires were distributed mainly based on a face-to-face approach. A survey was conducted using self-report questionnaire. Data were collected from 50 respondents who were selected by convenience sampling. The respondents were undergoing treatment procedures for drug addiction within one to six months, had joined the Cure and Care Rehabilitation Centre (CCRC) programme for the first time, were free from psychiatric or chronic illnesses and agreed to participate in the study. The study sample refers to drug addicts between 16 to 35 years who were undergoing treatment and rehabilitation procedures in CCRC. This study analysed the data using Smart-PLS. According to Hair et al. (2014), Smart-PLS is the best solution for an exploratory study and small sample size in data analysis. This study is similar to Purwanto et al. (2021), which had a small data sample of 40 respondents and analysed the data using Smart-PLS.

Procedure

Prior to data collection, the researchers had applied for approval from the relevant government agency to conduct this research. After the agency obtained the approval, the researchers contacted and set up an appointment with the agency's Prevention Officer in Kelantan to set a date for data collection. Briefing sessions were held between the research group and the agency's Prevention Officers for questionnaire distribution. The research samples were recruited from CCRC, Bachok, Kelantan. Each respondent was given compensation for their participation. After distributing the questionnaires, each respondent was informed about the research details. They were aware that all the information shared with the researcher was confidential. In addition, the questionnaire was answered individually. The respondents were reminded to answer the questionnaire based on their experiences and perception. They were given an ample 15 to 20 minutes to respond to the questionnaire. In addition, the researcher was made available to help the respondents answer the questionnaire.

Measures

The present study used questionnaires which consisted of several segments that included information on demographic profiles and personal factors such as self-worth, self-efficacy, optimism, depression, and motivation. The instruments used in the present research included The Rosenberg Self-Esteem Scale, Life Orientation Test, Commitment to Sobriety, The Patient Health Questionnaire, and a modified Alcohol Abstinence Self-Efficacy Scale (AASE).

Survey Instrument

The back-to-back translation method was used to translate the survey instrument into Malay (Brislin, 1970). The original English version was initially translated into Malay by the first translator, and then translated back into English by the second translator. Both translators are psychologists and

well-versed in both English and Malay. To measure the reliability and validity of the Malay-language version of the test tool, a pilot test was carried out. The pilot test findings showed that the test had a good reliability value of $\alpha \geq 0.6$ to 0.7.

Depression

Depression was assessed using nine (9) items from The Patient Health Questionnaire (PHQ) developed by Kroenke et al. (2001). This questionnaire measured symptoms of depression, such as feeling stressed or hopeless, difficulty sleeping (either sleeping too much, too little, or falling asleep), tiredness or lack of energy, overeating, or losing appetite. For each statement, the respondents were asked how often they experienced such problems within the last two weeks using the 4-point Likert scale. The item scales ranged from '0' (never) to '3' (almost daily). The total score could range from 0 to 27, with high scores indicating high depression. A score of more than 20 shows severe depression, 15-19 shows moderately severe depression, 10-14 shows moderate depression, while a score of 5-9 shows mild depression. The PHQ-9 is an accurate measure of depression used in several countries and cultures. Identifying depression is an important step in treating drug addiction effectively. One example is: "Over the last two weeks, how often have you been bothered by feeling down, depressed, or hopeless?" This instrument aligns with previous studies on drug abusers, such as Watkins et al. (2004) and Dum et al. (2008).

Self-Esteem

Self-esteem was measured using the Rosenberg Self-Esteem Scale (RSES). The RSES is the most used measurement tool in social science research to measure self-esteem. This measurement tool was designed by Rosenberg (1986). The respondents were given at most five (5) minutes to answer the RSES test, which is a short test. It was manageable as it only contained ten (10) items and was not too tedious for the respondents. In addition, the RSES used a 5-point Likert scale. The responses with low self-esteem were for items numbered 1, 2, 4, 6, and 7, while the responses for high self-esteem were for items numbered 3, 5, 8, 9, and 10. The overall respondent score was calculated by adding the score value after reverse-scoring for negative items. The overall respondent score had a total of between 0 and 50. An example of the item is: "I am able to do things as well as most other people." This instrument is in line with previous studies on drug abusers such as Singh and Saxena (2014) and D'Souza (2016).

Self-Efficacy

Self-efficacy was measured using the Alcohol Abstinence Self-Efficacy Scale (AASE) developed by (DiClemente et al., 1994). The AASE is a 20-item self-report measure to assess self-efficacy applied to alcohol abstinence. Hiller et al. (2000) adapted this questionnaire for drug abusers into four conceptual categories: 1) negative effect (like "When I am feeling depressed"); 2) social/positive (like "When I am being

offered drugs in a social situation"); 3) physical and other concerns (like "When I have a headache"); and 4) craving and urges (like "When I experience an urge or impulse to use drugs that catches me unprepared."). This questionnaire used a 4-point Likert scale, with not at all (0) to extremely (3), where higher scores indicate higher self-efficacy to abstain from drug use. The test results help evaluate the potential of someone's progress to drug treatment and determine the proper treatment. A high score in the AASE shows individuals with more confidence in their ability to not use drugs. This instrument aligns with previous studies on drug abusers such as Hiller et al. (2000).

The Life Orientation Scale

The Life Orientation Scale questionnaire by Scheier et al. (1994) measures an individual's level of optimism. In this study, the questionnaire contained ten (10) items. For this questionnaire, the higher the score, the higher their optimistic attitude. This questionnaire also used the five-point Likert scale (0 = strongly disagree; 4 = strongly agree) to show how much they agree with the 10 statements about positive and negative expectations. The responses for high optimism were for items numbered 2, 5, 6, and 8, while the responses for low optimism were for items numbered 1, 3, 4, and 7. After reverse-scoring for negative items, the overall respondent score was done by adding up the score value. An example of the item is: "I am a believer in the idea that 'every cloud has a silver lining." This instrument is in line with previous studies

on drug abusers such as Ottu and Umoren (2020).

Motivation for Recovery

Motivation for recovery was measured using the Commitment to Sobriety (CSS). CSS was designed by Kelly and Greene (2014) and consists of five items. CSS aimed to evaluate the respondents' commitment level towards drug use. Among the items in this questionnaire are "I will do whatever it takes to recover from my addiction," "I am committed to staying off drugs," "I never want to return to alcohol/drug use again," and "I have had enough drugs." Each item was rated on a 6-point Likert scale from strongly disagree (1) to strongly agree (6). CSS is useful to help explain addiction behaviour and the inclination to relapse into drug use. This instrument is in line with previous studies on drug abusers, such as Kelly et al. (2014) and Kelly and Greene (2014).

Data Analysis

Demographic Profiles. This section presents the description of the sample. The characteristics of respondents are described by gender, age, marital status, education, employment status, and income category. This information is presented in Table 1.

Based on Table 1, most respondents were between 21–40 years of age (84%) and were married (48%). Regarding the level of education, 40.0% of the respondents had PMR-level education, 46% were not working, and 38% were self-employed. Most respondents had no income for their

Table 1

Demographic profile of respondents

Items	Classification	Total	Percentage (%)
Age (years)	< 20	3	6.0
	21–40	42	84.0
	> 40	5	10.0
Marital Status	Single	6	12.0
	Married	24	48.0
	Divorced	20	40.0
Education	Not Going to School	1	2.0
	Certificate	3	6.0
	PMR	20	40.0
	Diploma	1	2.0
	SPM	25	50.0
Employment Status	Not working	23	46.0
	Self-Employed	19	38.0
	Student	1	2.0
	Part-time	7	14.0
Income Category (RM)	< RM500	11	22.0
	RM501–RM1000	7	14.0
	RM1001–RM1500	6	12.0
	RM1501 and above	3	6.0
	No Income	23	46.0

salary (46%), and 22% had income below RM500.

For statistical analyses, IBM SPSS Statistics 23.0 was used. Structural Equation Modelling (SEM) is an advanced statistical analysis method to decipher complex relationships between constructs across various disciplines, such as the social sciences. SEM proves to be especially useful when it comes to the evaluation of more complex and sophisticated multivariate data analysis relationships. SEM allows for the simultaneous analysis of multiple variables (Hair et al., 2016). In order to analyse the data collected, Statistical Package for the Social Science (SPSS) and Smart-PLS 3 (Partial Least Squares) software were applied. According to Hair et al. (2014), the PLS-SEM is a superior, powerful, and flexible tool for statistical model building. It was mentioned by Hair et al. (2014) that if the research goal is exploratory, the researcher should use PLS-SEM. Moreover, PLS-SEM is a convenient and dominant

statistical method in social sciences research. Thus, the data were analysed according to the analytical procedures suggested by Hair et al. (2017) and were performed for analysis of hypothesis 1 (H1: Personal resources influence recovery motivation significantly) and hypothesis 2 (H2: Personal resources have a significant relationship with depression and recovery motivation.

RESULTS

Measurement Model

A confirmatory factor analysis (CFA) was run using an algorithm to determine the measurement scale's item reliability, convergent validity, and discriminant validity to evaluate the measurement model. As shown in Figure 1, the conceptual model for this study and the measuring model were identical. Personal resources, depression, and recovery motivation were three of the model's latent variables. To obtain the results, Smart-PLS Algorithm was used.

Reliability

The reliability of the reflective construct is via composite reliability values that are available in Smart-PLS. All items' outer loadings were >0.50, with Composite Reliability values above 0.70 were deemed reliable (Hair et al., 2017). The reliability values of all constructs reported in Table 2 showed that the Composite Reliability values were above 0.70, leading to a conclusion that all constructs meet the acceptable level of reliability. Composite Reliability was reported as "reasonable to

consider and report both" (Hair et al., 2016, p. 107).

Convergent Validity

The average variance extracted (AVE) may be used to establish discriminant validity (Garson, 2016). This criterion is the calculated average value of the squared loadings of all items related to a construct (which is like the commonality of a construct) and should have a value of 0.50 or higher (Hair et al., 2016). The AVE values for all reflective constructs are shown in Table 3. All the AVE values exceeded the minimum value of 0.50. Accordingly, convergent validity is said to be achieved among all the constructs in the study.

Discriminant Validity

As per Table 3, all square roots of AVEs had values larger than their corresponding constructs correlations. This leads to the conclusion that the discriminant validity of the measurement instrument is confirmed. It implies that the variance of each construct is greater than the measurement error variance (Hair et al., 2016).

Structural Model Analysis

Testing the several proposed research hypotheses is the main goal of the structural model assessment. Based on the suggested research framework, this study provides two direct-effect research hypotheses, which were explored and refined. The next step was assessing whether the structural model is adequate after providing empirical data
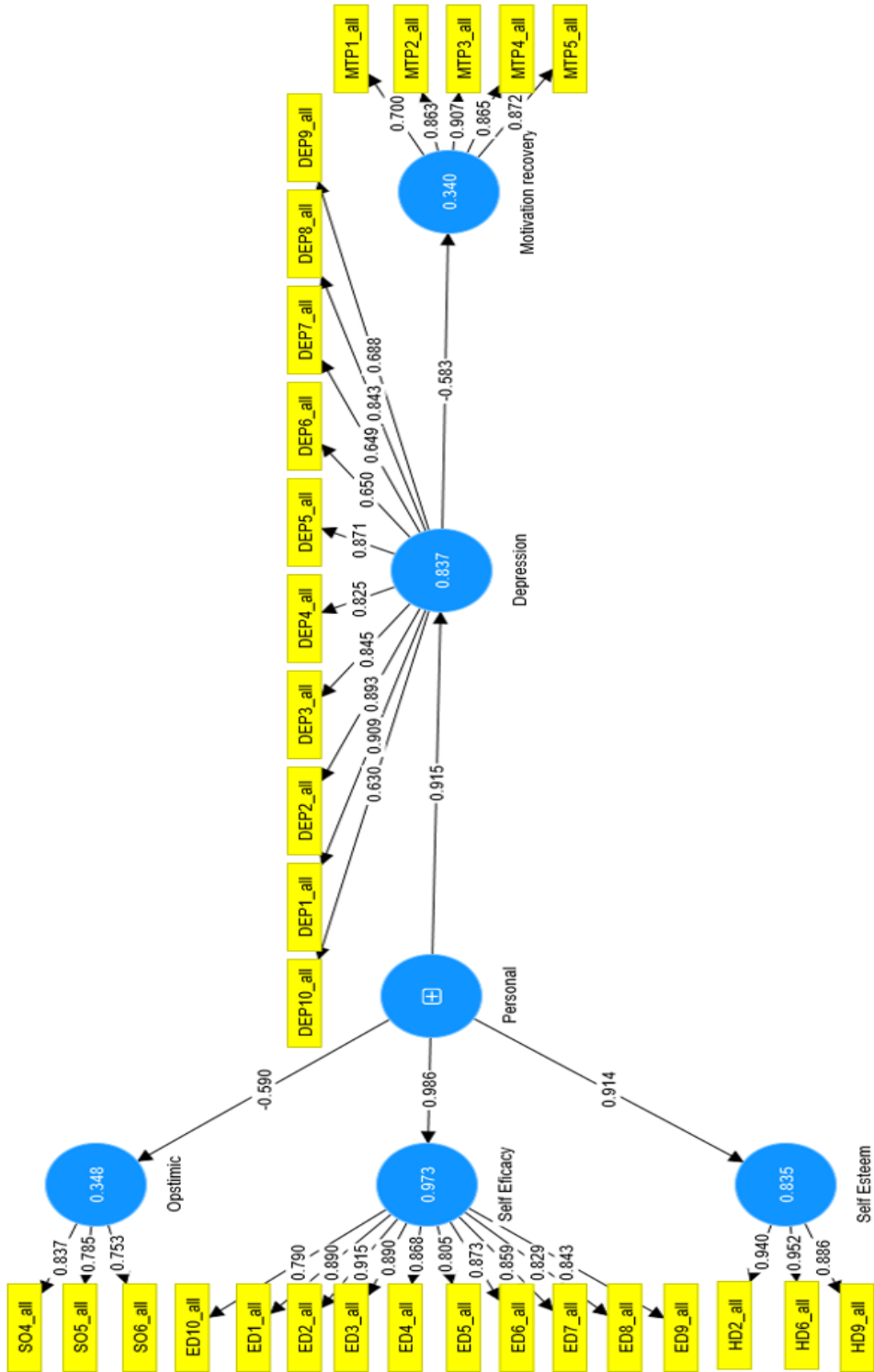
Figure 1. Measurement model

Table 2

Reliability and validity statistics

Construct	Items	Loadings	CR	AVE
Personal Resources				
Optimism	SO4_all	0.837	0.834	0.627
	SO5_all	0.785		
	SO6_all	0.753		
Self-Efficacy	ED1_all	0.890	0.965	0.734
	ED2_all	0.915		
	ED3_all	0.890		
	ED4_all	0.868		
	ED5_all	0.805		
	ED6_all	0.873		
	ED7_all	0.859		
	ED8_all	0.829		
	ED9_all	0.843		
	ED10_all	0.790		
Self-Esteem	HD2_all	0.940	0.948	0.858
	HD6_all	0.952		
	HD9_all	0.886		
Depression	DEP1_all	0.909	0.941	0.620
	DEP2_all	0.893		
	DEP3_all	0.845		
	DEP4_all	0.825		
	DEP5_all	0.871		
	DEP6_all	0.650		
	DEP7_all	0.649		
	DEP8_all	0.843		
	DEP9_all	0.688		
	DEP10_all	0.630		
Recovery Motivation	MTP1_all	0.700	0.925	0.713
	MTP2_all	0.863		
	MTP3_all	0.907		
	MTP4_all	0.865		
	MTP5_all	0.872		

Table 3

Discriminant validity

	Depression	Optimistic	Personal Resources	Recovery Motivation	Self-Efficacy
Depression	0.788				
Optimistic	-0.508	0.792			
Personal Resources	0.915	-0.590	0.788		
Recovery Motivation	-0.583	0.633	-0.716	0.845	
Self-Esteem	0.549	-0.539	-0.429	0.761	0.926

regarding the validity and reliability of the constructs' measurement model. Significant and robust routes support that theory during the structural model assessment (Hair et al., 2017). The structural model assessment also shows the predictability of the model.

The path coefficients, t-values, and significance of the relationship between personal resources, depression, and recovery motivation by the bootstrapping procedure are presented in Table 4. The bootstrapping results confirm that the path coefficients reported a significant level at 0.05 and a t-value above 1.64 (Hair et al., 2017). Based on Figure 2, the results of SEM, as shown in Table 4, support hypotheses 1 and 2. Personal resources had a significant relationship with depression (H1: β= 0.915, $p \leq 0.001$), meanwhile, depression had a significant negative relationship with recovery motivation (H2: β= -0.583, $p \leq 0.001$).

Table 5 shows the results of the mediating effect of recovery motivation. Hypothesis H3 assumes that depression mediates between personal resources and recovery motivation (PS → DP → MR) with a t-value of 6.323 (more than 1.64)

and a *p*-value of 0.00. Thus, hypothesis 3 is supported.

Table 5 indicates that depression fully mediates the relationship between personal resources and recovery motivation. The findings show that when depression is low, recovery motivation is high. These findings further indicate that controlling the mediating variable can enhance the relationship between personal resources and recovery motivation. The structural model with standardised weights is shown in Figure 3.

The core objective of the present study was to investigate the relationship between personal resources and recovery motivation with the mediating role of depression among former addicts during the treatment programme. Personal resources were analysed by the dimension of optimism, self-efficacy, and self-esteem among the respondents during rehabilitation. The findings suggest that personal resources, i.e., optimism, self-efficacy, and self-esteem, play an important role in increasing self-determination and surges for recovery motivation.
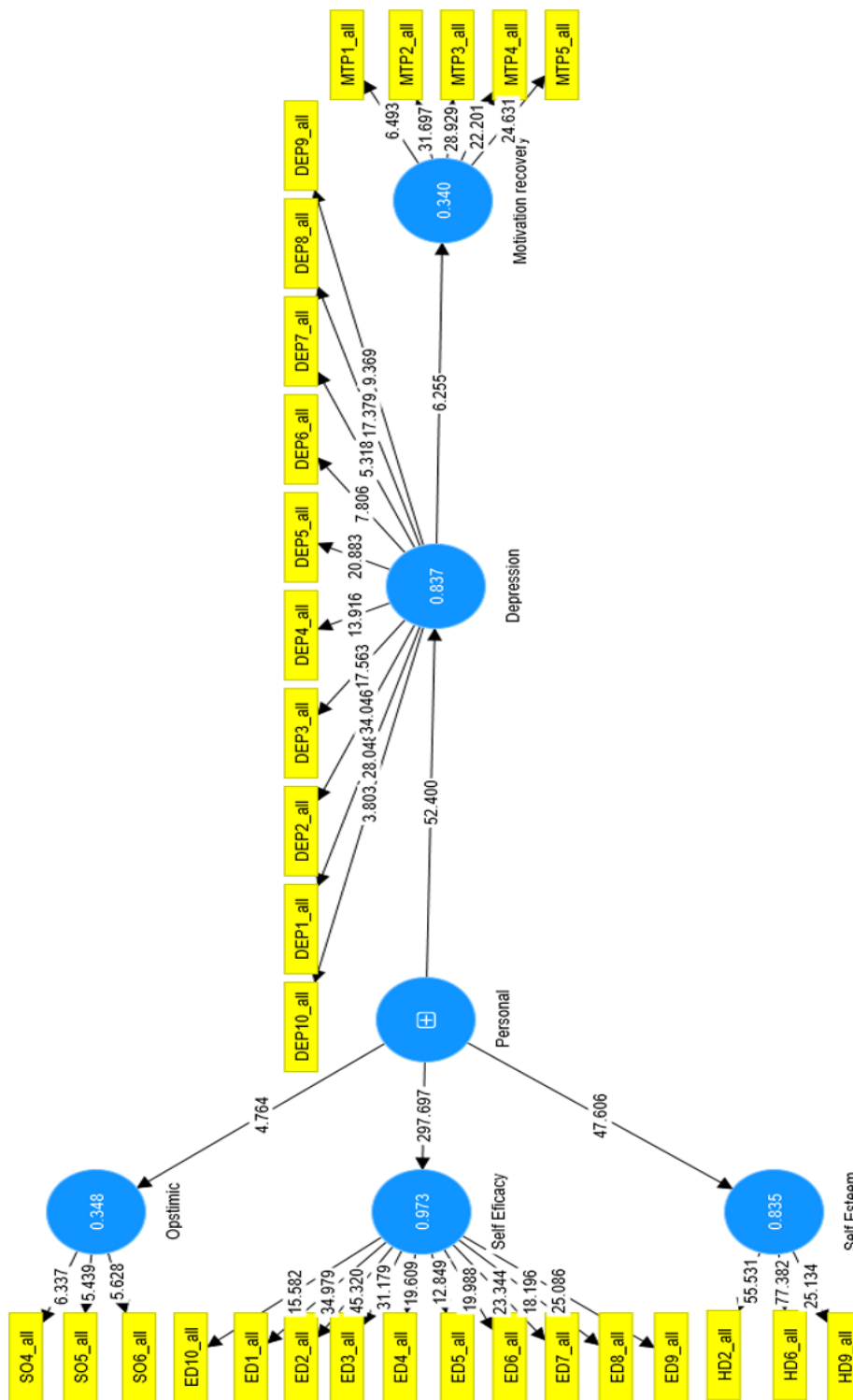
Figure 2. Structural model

Table 4

Results of hypotheses testing

Hypothesis	Path	Estimate	S.d	t-value	*p*-values	Results
H1	PS → DP	0.915	0.018	52.400	0.000	Supported
H2	DP → MR	-0.583	0.092	6.255	0.000	Supported

Table 5

Model after mediation – Hypothesis 3

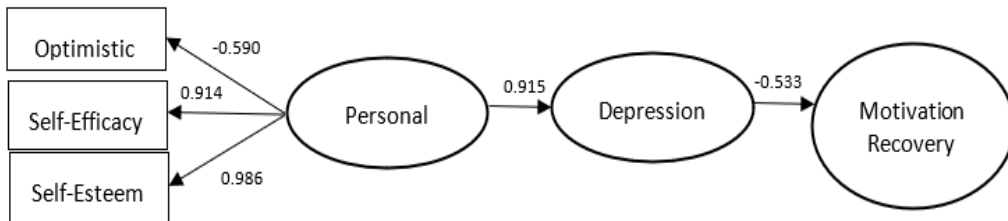| Influence Relation	Independent Variable	Path	Dependent Variable	Estimate	t-value	*p*-values	Results
Indirect	PS	→	MR	-0.533	6.323	0.00	Supported

Figure 3. Hypothesised model with path coefficients

DISCUSSION

The present study examined the relationship between personal resources, namely optimism, self-efficacy and self-esteem, and recovery motivation, with the mediation of depression among individuals with a drug addiction history. Based on the statistical results for hypothesis 1, a significant relationship between personal resources and depression was confirmed; thus, it is supported. This finding is consistent with the preceding study by Rajabi and Salmanpour (2019), which discovered that psychological instability (i.e., poor self-efficacy, low self-esteem, and inability to have optimistic behaviour) resulted in depression among drug addicts during their treatment. It implies that an increase in personal resources is accompanied by improved psychological well-being, which reduces the symptoms of depression. On the other hand, hypothesis 2, there is a relationship between depression and recovery motivation, was confirmed, and this is supported. These results are also consistent with Ghani et al. (2018) and Liu et al. (2015), which showed a significant link between an addict's willingness to recover from drug addiction and feelings of hopelessness and worthlessness of life that can lead to the demotivation of addicts during their treatment. When a former addict suffers from depression, the addict can

get demotivated in their recovery process. Lastly, hypothesis 3 suggests that depression mediates between personal resources and recovery motivation, and the result is supported.

The findings recognised an important mediating role of depression between personal resources and recovery motivation. This finding is consistent with Kitinisa (2019), demonstrating that depression is significantly associated with personal resources. If an individual has higher levels of depression, it will affect his/her recovery motivation. In addition, Müller et al. (2019) pointed out a noticeable connection between self-efficacy and personal motivation to overcome chronic alcohol addiction. Self-efficacy paved the way for personal improvement and helped the affected individuals abstain from hazardous substances. This finding suggests that the role of personal resources, including self-efficacy, self-esteem, and insurmountable optimism, cannot be taken for granted in returning the former addict to society. Furthermore, other studies, such as Chan et al. (2019), examined the relationship between one's psychological needs and drug addiction. They found that psychological needs have become pivotal in persuading an individual to consume drugs. An important issue emerging from the findings is that lack of motivation would potentially aggravate depression in an individual. Tran et al. (2020) suggest that physical and cognitive activities result from decision-making made by an individual. When a person is depressed, the decision-making processes are affected.

CONCLUSION

This study concludes that there is a significant relationship between personal resources and recovery motivation among individuals with drug addiction. Furthermore, the process of recovery motivation can be highly influenced by depression among former addicts. The finding of the present research is consistent with those similar to previous studies. Thus, self-efficacy, self-esteem, and overall optimistic behaviour are linked to improvement concerning recovery motivation among individuals with drug addiction. However, this relationship is mediated by the psychological state of the individual, i.e., depression. Thus, the experience of depression may affect recovery motivation. It contributes to the understanding that a visible connection has been found between an addict's willingness to recover from drug addiction and feelings of hopelessness and worthlessness linked to the demotivation of addicts during their treatment. As an implication, it is suggested that, in helping the individual with a drug addiction problem, apart from facilitating the improvement in their addictive thought and behaviour, mental health intervention should also be considered so that an individual's resources can be optimised, and recovery motivation enhanced. Subsequently, a better result can be yielded.

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REFERENCES

Ali, A. Y., & Sigalla, H. L. (2017). The elusive recovery from drug addiction in Pemba: How addicted persons and their families cope. *Journal of the Geographical Association of Tanzania*, *37*(1), 133-146. https://doi.org/10.56279/jgat.v37i1.148

Bandura, A. (2002). Social foundations of thought and action. In D. F. Marks (Ed.), *The health psychology reader* (pp. 94-106). SAGE Publications Ltd. https://doi.org/10.4135/9781446221129.n6

Best, D., Beckwith, M., Haslam, C., Alexander Haslam, S., Jetten, J., Mawson, E., & Lubman, D. I. (2016). Overcoming alcohol and other drug addiction as a process of social identity transition: The social identity model of recovery (SIMOR). *Addiction Research and Theory*, *24*(2), 111-123. https://doi.org/10.3109/16066359.2015.1075980

Brevers, D., Bechara, A., Kilts, C. D., Antoniali, V., Bruylant, A., Verbanck, P., Kornreich, C., & Noël, X. (2018). Competing motivations: Proactive response inhibition toward addiction-related stimuli in quitting-motivated individuals. *Journal of Gambling Studies*, *34*(3), 785-806. https://doi.org/10.1007/s10899-017-9722-2

Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology*, *1*(3), 185-216. https://doi.org/10.1177/135910457000100301

Chan, G. H. Y., Lo, T. W., Tam, C. H. L., & Lee, G. K. W. (2019). Intrinsic motivation and psychological connectedness to drug abuse and rehabilitation: The perspective of self-determination. *International Journal of Environmental Research and Public Health*, *16*(11), 1934-1951. https://doi.org/10.3390/ijerph16111934

Chen, G. (2018). Building recovery capital: The role of "Hitting Bottom" in desistance and recovery from substance abuse and crime. *Journal of Psychoactive Drugs*, *50*(5), 420-429. https://doi.org/10.1080/02791072.2018.1517909

D'Souza, N. (2016). Anger and self-esteem amongst alcohol addicts and drug addicts. *Indian Journal of Mental Health*, *3*(4), 459-463. https://doi.org/10.30877/ijmh.3.4.2016.459-463

DiClemente, C. C., Carbonari, J. P., Montgomery, R. P. G., & Hughes, S. O. (1994). The alcohol abstinence self-efficacy scale. *Journal of Studies on Alcohol*, *55*(2), 141-148. https://doi.org/10.15288/jsa.1994.55.141

Duckworth, A. L., Gendler, T. S., & Gross, J. J. (2016). Situational strategies for self-control. *Perspectives on Psychological Science*, *11*(1), 35-55. https://doi.org/10.1177/1745691615623247

Dum, M., Pickren, J., Sobell, L. C., & Sobell, M. B. (2008). Comparing the BDI-II and the PHQ-9 with outpatient substance abusers. *Addictive Behaviors*, *33*(2), 381-387. https://doi.org/10.1016/j.addbeh.2007.09.017

Fredericks, J., & Samuel, E. (2014). Drugs and recovery: A qualitative study in Atlantic Canada. *American International Journal of Social Science*, *3*(2), 28-34.

Galla, B. M., & Duckworth, A. L. (2015). More than resisting temptation: Beneficial habits mediate the relationship between self-control and positive life outcomes. *Journal of Personality and Social Psychology*, *109*(3), 508-525. https://doi.org/10.1037/pspp0000026

Garson, G. D. (2016). *Partial least squares. Regression and structural equation models*. Statistical Publishing Associates.

Ghani, N. A., Ghazalli, F. S. M., Abdullah, B., Mohd, Z., & Yunus, A. M. (2018). Addict's expectations and hopes towards their family during drug rehabilitation. *International Journal of Academic Research in Business and Social Sciences*, *7*(12), 531-536. https://doi.org/10.6007/IJARBSS/v7-i12/3634

Grodin, E. N., Lim, A. C., MacKillop, J., Karno, M. P., & Ray, L. A. (2019). An examination of motivation to change and neural alcohol cue reactivity following a brief intervention. *Frontiers in Psychiatry*, *10*, 1-10. https://doi.org/10.3389/fpsyt.2019.00408

Gunn, A., & Samuels, G. M. (2020). Promoting recovery identities among mothers with histories of addiction: Strategies of family engagement. *Family Process*, *59*(1), 94-110. https://doi.org/10.1111/famp.12413

Hair, J. F., Jr., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage Publications.

Hair, J. F., Jr., Sarstedt, M., Ringle, C. M., & Gudergan, S. P. (2017). *Advanced issues in partial least squares structural equation modeling*. Sage Publications.

Hair, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European Business Review*, *26*(2), 106-121. https://doi.org/10.1108/EBR-10-2013-0128

Hiller, M. L., Broome, K. M., Knight, K., & Simpson, D. D. (2000). Measuring self-efficacy among drug-involved probationers. *Psychological Reports*, *86*(2), 529-538. https://doi.org/10.2466/pr0.2000.86.2.529

Kelly, J. F., & Greene, M. C. (2014). Beyond motivation: Initial validation of the commitment to sobriety scale. *Journal of Substance Abuse Treatment*, *46*(2), 257-263. https://doi.org/10.1016/j.jsat.2013.06.010

Kelly, J. F., Stout, R. L., Greene, M. C., & Slaymaker, V. (2014). Young adults, social networks, and addiction recovery: Post treatment changes in social ties and their role as a mediator of 12-step participation. *PLoS ONE*, *9*(6), Article e100121. https://doi.org/10.1371/journal.pone.0100121

Kitinisa, P. (2019). *Self-Esteem, depression and substance abuse among school going adolescents*. Makerere University.

Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine*, *16*(9), 606-613. https://doi.org/10.1046/j.1525-1497.2001.016009606.x

Linke, S. E., Robinson, C. J., & Pekmezi, D. (2013). Applying psychological theories to promote healthy lifestyles. *American Journal of Lifestyle Medicine*, *8*(1), 4-14. https://doi.org/10.1177/1559827613487496

Liu, R. T., Kleiman, E. M., Nestor, B. A., & Cheek, S. M. (2015). The hopelessness theory of depression: A quarter-century in review. *Clinical Psychology: Science and Practice*, *22*(4), 345-365. https://doi.org/10.1111/cpsp.12125

Locke, E. A., & Bandura, A. (1987). Social foundations of thought and action: A social-cognitive view. *The Academy of Management Review*, *12*(1), 169-171. https://doi.org/10.2307/258004

Mokuolu, B. O., & Adedotun, A. S. (2020). Impact of self-efficacy and social support on intention to quit drug use among people with drug abuse cases. *Advances in Research*, *21*(1), 67-74. https://doi.org/10.9734/air/2020/v21i130182

Morgenstern, J., Kuerbis, A., Houser, J., Muench, F. J., Shao, S., & Treloar, H. (2016). Within-person associations between daily motivation and self-efficacy and drinking among problem drinkers in treatment. *Psychology of Addictive Behaviors*, *30*(6), 630-638. https://doi.org/10.1037/adb0000204

Müller, A., Znoj, H., & Moggi, F. (2019). How are self-efficacy and motivation related to drinking five years after residential treatment? A longitudinal multicenter study. *European Addiction Research*, *25*(5), 213-223. https://doi.org/10.1159/000500520

Ottu, I. F. A., & Umoren, A. M. (2020). Social influence processes and life orientation in risk perception of drug use among undergraduates. *African Journal of Drug and Alcohol Studies*, *19*(2), 137-148.

Purwanto, A., Asbari, M., Santoso, T. I., Sunarsi, D., & Ilham, D. (2021). Education research quantitative analysis for little respondents: Comparing of Lisrel, Tetrad, GSCA, Amos, SmartPLS, WarpPLS, and SPSS. *Jurnal Studi Guru Dan Pembelajaran*, *4*(2), 335-351.

Rajabi, F., & Salmanpour, S. (2019). Comparison of resiliency, optimism and social self-efficacy in delinquent and normal adolescents. *Social and Management Research Journal*, *16*(2), 107-118. https://doi.org/10.24191/smrj.v16i2.7066

Razali, A., & Madon, Z. (2020). Predictor factor on relapse among former addicts. *International Journal of Academic Research in Business and Social Sciences*, *10*(16), 278-288. https://doi.org/10.6007/ijarbss/v10-i16/8311

Razali, A., Madon, Z., & Hassan, M. S. (2021). Women and substance abuse: Examining the factors influencing relapse. *Asian Women*, *37*(3), 51-73. https://doi.org/10.14431/aw.2021.9.37.3.51

Rosenberg, M. (1986). *Conceiving the self*. RE Krieger.

Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A reevaluation of the life orientation test. *Journal of Personality and Social Psychology*, *67*(6), 1063-1078. https://doi.org/10.1037/0022-3514.67.6.1063

Singh, T. K., & Saxena, S. (2014). Emotional intelligence and self esteem of alcohol and cannabis dependents. *International Journal of Indian Psychology*, *1*(4), 87-96. https://doi.org/10.25215/0104.011

Skóra, M. N., Pattij, T., Beroun, A., Kogias, G., Mielenz, D., de Vries, T., Radwanska, K., & Müller, C. P. (2020). Personality driven alcohol and drug abuse: New mechanisms revealed. *Neuroscience and Biobehavioral Reviews*, *116,* 64-73. https://doi.org/10.1016/j.neubiorev.2020.06.023

Subramaniam, P., Rogowska, J., DiMuzio, J., Lopez-Larson, M., McGlade, E., & Yurgelun-Todd, D. (2018). Orbitofrontal connectivity is associated with depression and anxiety in marijuana-using adolescents. *Journal of Affective Disorders*, *239*, 234-241. https://doi.org/10.1016/j.jad.2018.07.002

Tatum, A. K., & Houston, E. (2017). Examining the interplay between depression, motivation, and antiretroviral therapy adherence: A social cognitive approach. *AIDS Care*, *29*(3), 306-310. https://doi.org/10.1080/09540121.2016.1220481

Tran, T., Hagen, A. E. F., Hollenstein, T., & Bowie, C. R. (2020). Physical-and cognitive-effort-based decision-making in depression: Relationships to symptoms and functioning. *Clinical Psychological Science*, *9*(1), 53-67. https://doi.org/10.1177/2167702620949236

Wang, L., Xu, B., Gu, Y., Zhu, J., & Liang, Y. (2019). The mediating and moderating effects of resilience on the relationship between perceived stress and depression in heroin addicts. *Journal of Community Psychology*, *47*(3), 495-503. https://doi.org/10.1002/jcop.22133

Wangdi, K., & Jamtsho, T. (2019). Drug use among teenagers and young adults in Bhutan. *Indian Journal of Psychological Medicine*, *41*(6), 535-540. https://doi.org/10.4103/IJPSYM.IJPSYM_348_19

Watkins, K. E., Hunter, S. B., Wenzel, S. L., Tu, W., Paddock, S. M., Griffin, A., & Ebener, P. (2004). Prevalence and characteristics of clients with co-occurring disorders in outpatient substance abuse treatment. *American Journal of Drug and Alcohol Abuse*, *30*(4), 749-764. https://doi.org/10.1081/ADA-200037538

Wickersham, A., Leightley, D., Archer, M., & Fear, N. T. (2020). The association between paternal psychopathology and adolescent depression and anxiety: A systematic review. *Journal of Adolescence*, *79*(1), 232-246. https://doi.org/10.1016/j.adolescence.2020.01.007

Woldgabreal, Y., Day, A., & Ward, T. (2016). Linking positive psychology to offender supervision outcomes. *Criminal Justice and Behavior*, *43*(6), 697-721. https://doi.org/10.1177/0093854815620816

World Health Organization. (2019). *Mental health and substance use*. https://www.who.int/teams/mental-health-and-substance-use