

Unpacking Treatment Readiness: The Role of Awareness, Willingness, Perseverance and Self-control Among Drug Users

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Abstract

This study focuses on the level of drug users' treatment readiness and the contribution of psychological components to treatment readiness. Treatment readiness is an important element in the behaviour change process because the effectiveness of recovery depends on the individual's level of acceptance and internal readiness. This study examined the contribution of four psychological components to treatment readiness, namely awareness, willingness, perseverance and self-control on treatment readiness using the Readiness for Drug Addiction Treatment Test (ReDATT) instrument. Data were collected from 217 drug users undergoing treatment at private rehabilitation centres through a self-administered questionnaire. Correlation and multiple linear regression analyses were conducted using IBM SPSS Statistics version 30 software. The study findings showed that all psychological components had a significant positive relationship with the level of treatment readiness ($p < 0.001$). In addition, simple linear regression analyses showed that each of the four psychological components made a significant statistical contribution to treatment readiness within the ReDATT framework. These findings also provide practical implications for recovery practitioners in developing more targeted interventions to strengthen psychological readiness among individuals undergoing treatment. Emphasis on psychological aspects such as awareness, willingness, perseverance and self-control is seen as important to ensure that the recovery process can be implemented more effectively, especially during the early phases of treatment which are often challenging.

Keywords: Drug Users, Psychological Components, Rehabilitation Treatment, Treatment Readiness.

Introduction

Drug addiction treatment aims to reduce substance use and alleviate related symptoms (1–3). Successful recovery necessitates being psychologically prepared to adjust, learn from past events and participate in therapy (4). Thus, treatment readiness is closely associated with drug users' willingness to participate in rehabilitation programs. This study defines treatment readiness as an internal psychological state that reflects an individual's readiness to initiate, engage in and persist in the process of treatment and recovery from substance addiction. It encompasses cognitive, emotional and behavioral aspects not just physical presence or passive acceptance of treatment. Treatment readiness consists of four interrelated components, namely awareness, willingness, perseverance and self-control. Awareness refers to the ability to identify an addiction problem and the need to change; willingness refers to the desire to engage in treatment and recovery; perseverance refers to the ability to maintain commitment despite challenges; and self-control involves the ability to control

impulses, emotions and behaviors that can interfere with the treatment and recovery process. Drug users' treatment readiness and acceptance of rehabilitation programmes are important for treatment engagement, adherence, recovery and behavioural change (5–10). A high level of readiness among drug users can increase individual acceptance and commitment to undergoing treatment and the recovery process, resulting in more positive and effective recovery (11). In addition, identifying the level of drug users' treatment readiness at the beginning of treatment is essential (12, 13). Malaysia is recognized for its continuous efforts in combating drug addiction and drug-related crime (14). Treatment readiness is an important factor associated with active engagement in the recovery process (15). This readiness influences individuals' willingness to adhere to treatment and maintain their commitment (16). To enhance treatment readiness individuals need to understand how treatment can help them achieve personal goals and

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improve their quality of life (17, 18). Accepting responsibility for one's own behavior and willingness to change are also important factors that support treatment effectiveness and reduce the risk of withdrawal from recovery programs (19, 20). Previous findings have shown that psychological factors related to recovery are associated with relapse vulnerability among individuals undergoing rehabilitation (21). In drug addiction, treatment readiness involves not only participation in treatment but also the internal psychological state toward change (22, 23). Previous studies show that treatment readiness comprises interrelated psychological components that influence treatment involvement, dropout and relapse (24, 25). Cognitive readiness refers to an individual's awareness of the problem of addiction, its effects and the need to change which contributes to personal development and more positive recovery outcomes (26, 27).

This study conceptualizes readiness through four components: awareness, willingness, perseverance and self-control. Awareness refers to recognizing the addiction problem, its negative effects and the need for change (28, 29). Willingness refers to an individual's readiness and motivation to accept and engage in treatment, influenced by intrinsic motivation and personal values and is important in promoting behavioral change, treatment engagement and recovery effectiveness (9, 15, 30). Psychometrics enables objective measurement of psychological and behavioral aspects (31), making perseverance important for treatment effectiveness and relapse prevention. Perseverance refers to maintaining motivation, coping with challenges and continuing recovery despite obstacles (32-35). It is associated with stress tolerance, determination and the use of social support (36, 37). Self-control involves regulating impulses, urges and risky behaviors contributing to sustained behavioral change and relapse prevention (38-40). As readiness may fluctuate during early treatment (24, 25), assessing it through a single dimension may not capture clients' psychological complexity (19). ReDATT integrates multiple psychological components to provide a more comprehensive assessment of drug users' treatment readiness. Existing approaches often assess readiness from different perspectives such as motivation to change and behavioural change and may not fully capture the individual's internal psychological state.

In drug addiction, treatment readiness involves

cognitive, emotional and behavioural aspects including understanding the addiction problem accepting the need for change and engaging in treatment. Therefore, this study focuses on four interrelated components: awareness, willingness, perseverance and self-control which were integrated into the Readiness for Drug Addiction Treatment Test (ReDATT). The instrument was specifically developed for drug users undergoing treatment at private rehabilitation centres in Malaysia and provides a structured approach to measuring treatment readiness and examining the contribution of these components to treatment readiness.

This conceptual framework aligns with Motivational Interviewing which emphasizes self-awareness, intrinsic motivation and self-control through a client-focused approach (41). Awareness, willingness, perseverance and self-control represent key psychological factors influencing treatment engagement and recovery. Therefore, these components form the core of ReDATT for assessing treatment readiness in the local context. Although psychological factors are increasingly recognized in treatment readiness, previous studies often assessed readiness based on motivation to change and the level of behavioral change and used instruments developed in different cultural and treatment contexts. Research assessing treatment readiness as an integrated construct that encompasses awareness, willingness, perseverance and self-control among drug users in Malaysia is still limited. The originality of this study lies in the integration of all four psychological components within the ReDATT framework to provide a treatment readiness assessment that is appropriate to the local context. This study contributes to existing knowledge by providing empirical evidence on the relationship and contribution of each component to treatment readiness among drug users in Malaysia. Based on existing literature, this study set two main objectives namely to examine the relationship between awareness, willingness, perseverance and self-control with the level of treatment readiness among drug users, as well as to determine the combined contribution of these four psychological components to the level of treatment readiness among drug users.

Methodology

This study is an exploratory quantitative study that uses a questionnaire approach to develop and assess the level of treatment readiness for drug addiction. Data were collected from five private drug rehabilitation centres in Terengganu, Malaysia, namely Madrasah Khairul Insan (HATI) in Kampung Jenagor (approximately 5.08° N, 102.78° E), Perkampungan Darul Barakah (PDB) in Kampung Temala (approximately 5.15° N, 103.19° E), Baitul Cakna Lelaki in Ajil (approximately 5.09° N, 103.09° E), Pondok Remaja Inabah II in Kampung Sungai Ikan (approximately 5.35° N, 103.01° E) and Rumah Rakan Islah (RAI') in Kampung Bari Besar (approximately 5.70° N, 102.72° E). An exploratory approach was chosen because this study involved the development and initial evaluation of a new instrument that was still in the early stages of construction and validation. The instrument developed, Readiness for Drug Addiction Treatment Test (ReDATT), aims to measure the level of psychological treatment readiness of drug users at rehabilitation centres. ReDATT consists of 40 items built based on the conceptual framework of treatment readiness which includes four main psychological components namely awareness, willingness, perseverance and self-control. Respondents were asked to rate their level of agreement with each statement using a six-point Likert scale from 1 (strongly disagree) to 6 (strongly agree). The use of this even scale aims to reduce the tendency for neutral responses and encourage respondents to make a clearer assessment of each item. The score for each psychological component and the overall treatment readiness score were calculated by summing the item scores, where higher scores indicate a higher level of treatment readiness. The data obtained were then analyzed to assess the psychometric properties of the instrument and to test the relationship between the psychological components of readiness awareness, willingness, perseverance and self-control with the overall level of drug users' treatment readiness.

Data Collection

Data collection was conducted face-to-face at private drug rehabilitation centres using census sampling where all eligible drug users were invited to participate in the study. All individuals who met the inclusion criteria and were in the rehabilitation centres during the data collection period were

considered respondents. Participation is voluntary with informed consent and confidentiality is guaranteed.

In addition to answering the instrument items, respondents provided basic demographic information. This study involved five private drug rehabilitation centres in Terengganu. Among the drug users identified throughout the data collection period, a total of 217 participants who met the eligibility criteria participated and completed the instrument thus forming the final sample of the study. Non-participation was due to several factors including being undergoing detoxification, not being at the centres during data collection, being involved in outside work or programs and health-related factors. This information explains the sample selection process and study participation rate and confirms that the sample size is sufficient for Exploratory Factor Analysis based on the ratio of respondents to recommended instrument items. Participants who met the study criteria were determined based on treatment status, having completed the detoxification process, ability to respond to the instrument and willingness to participate in the study. After the questionnaires were collected each form was reviewed to ensure that all responses were complete and usable before the coding and data entry process was conducted. Next, responses were scored based on the instrument scoring procedure and compiled into a data set for analysis purposes.

Data analysis was conducted using IBM SPSS Statistics version 30. Reliability analysis was conducted using Cronbach's Alpha to assess the internal consistency of each component and the entire instrument. To identify the factor structure and number of components of the instrument, factor analysis was performed using Principal Component Analysis with Varimax rotation. Data fit was assessed using Kaiser-Meyer-Olkin index and Bartlett's Test of Sphericity. Factors were retained based on eigenvalues >1.0, factor loadings ≥0.40 and theoretical considerations. In addition, multiple linear regression analysis was conducted to assess the relative contribution of each psychological component within the overall treatment readiness construct. Correlation analysis was used to assess the relationship between the four psychological components of

awareness, willingness, perseverance and self-control with the level of drug addiction treatment readiness.

Results

Table 1 displays Cronbach's alpha coefficient. In general, Cronbach's alpha values above 0.70 indicate a good level of internal reliability, while values around 0.60 to 0.70 are still considered acceptable (42, 43). Reliability analysis was conducted to assess the internal consistency of the study instrument. The results show that all four

components namely awareness, willingness, perseverance and self-control have very high internal reliability values. The reliability coefficients ranged from 0.898 to 0.970 across the four components. Perseverance demonstrated the highest internal consistency ($\alpha = 0.970$), followed by willingness ($\alpha = 0.956$), awareness ($\alpha = 0.949$) and self-control ($\alpha = 0.898$). These findings indicate that all four components demonstrated high internal consistency and that the items within each component consistently measured their respective psychological dimensions.

Table 1: Consistency and Reliability

Component	Number of Items	Cronbach's Alpha (α)
Awareness	10	0.949
Willingness	10	0.956
Perseverance	10	0.970
Self-control	10	0.898

Principal component analysis with varimax rotation was used for factor extraction, while the KMO and Bartlett's tests assessed data suitability, with factors retained based on eigenvalues >1.0 . The awareness component comprised items A1 to A10 with factor loadings ranging from 0.668 to 0.910. The willingness component comprised items W1 to W10 with factor loadings ranging from 0.652 to 0.945. The perseverance component comprised items P1 to P10 with factor loadings ranging from 0.520 to 0.930. The self-control component comprised items S1 to S10 with factor loadings ranging from 0.753 to 0.890. Exploratory factor analysis was conducted separately for each theoretically defined instrument component: awareness, willingness, perseverance and self-control. As expected, a single dominant factor emerged for each component confirming the unidimensional structure of the item sets.

Correlation Analysis

Correlation analysis was conducted to examine the relationships between the study variables and the results of the analysis are presented in Table 2. The study findings showed that there was a significant positive relationship between the four psychological components and the level of treatment readiness. As shown in Table 2, all four psychological components demonstrated strong and statistically significant positive correlations with treatment readiness ($p < 0.001$). Perseverance and self-control showed the strongest correlations with treatment readiness ($\rho = 0.909$ for both), followed by willingness ($\rho = 0.907$) and awareness ($\rho = 0.813$). These correlations should be interpreted in the context of a part-whole relationship because the treatment readiness score is a composite score comprising awareness, willingness, perseverance and self-control.

Table 2: Correlation Analysis

Component	Awareness	Willingness	Perseverance	Self-control	Treatment Readiness
Awareness	1.000	0.731**	0.688**	0.659**	0.809**
Willingness	0.731**	1.000	0.836**	0.775**	0.901**
Perseverance	0.688**	0.836**	1.000	0.812**	0.899**
Self-control	0.659**	0.775**	0.812**	1.000	0.912**
Treatment Readiness	0.813**	0.907**	0.909**	0.909**	1.000

Note: All correlation coefficients are significant at $p < 0.001$ (**)

Multiple Linear Regression Analysis

This study used multiple linear regression analysis to examine the relative contribution of psychological components to the level of

treatment readiness among male drug users undergoing recovery. A multiple linear regression analysis was conducted to assess the relative contribution of each psychological component

within the ReDATT framework. Because treatment readiness is a composite score formed from the components of awareness, willingness, perseverance and self-control these regression results should be interpreted as reflecting the internal structural relationship within the ReDATT framework rather than as independent predictors of an external treatment readiness outcome. As presented in Table 3, all four psychological components demonstrated statistically significant

positive beta coefficients ($p < 0.001$). Perseverance showed the highest relative contribution ($\beta = 0.287$), followed closely by willingness ($\beta = 0.286$), self-control ($\beta = 0.281$) and awareness ($\beta = 0.260$). These findings indicate that all four components contributed significantly within the ReDATT framework with perseverance demonstrating the largest relative contribution among the four components.

Table 3: Relative Contributions of ReDATT Components to Treatment Readiness

Component	Beta	p-value
Awareness	0.260	< 0.001
Willingness	0.286	< 0.001
Perseverance	0.287	< 0.001
Self-control	0.281	< 0.001

Note: All components showed statistically significant relative contributions, $p < 0.001$

Discussion

This study examines the relationship between four psychological components and the level of drug users' readiness to engage in treatment at rehabilitation centres. These findings confirm that treatment readiness is shaped by interacting psychological components. The strong interrelationships among components indicate that readiness is influenced by interconnected psychological factors namely awareness, willingness, perseverance and self-control each showed a high and significant positive relationship with treatment readiness. These findings provide empirical support for the role of internal psychological components in the overall treatment readiness of individuals. These results are consistent with previous empirical studies that show that psychological components play an important role in determining an individual's initial engagement and continuation in rehabilitation treatment (44). Awareness appears to function as a cognitive trigger that facilitates initial acceptance of treatment. This finding is consistent with the Transtheoretical Model of Change which states that awareness of the problem is the initial stage in the process of behavioral change (6). Lack of awareness can hinder early acceptance of treatment interventions as well as increase resistance to lifestyle changes needed in the recovery process. In the context of this study, measuring the awareness component allows for the identification of individuals who require

additional motivational interventions (45). Willingness reflects intrinsic motivation that strengthens engagement in rehabilitation processes, emphasizing that intrinsic motivation and voluntary desire to change are critical factors in determining the initial level of treatment readiness. Individuals with high willingness are more open to interventions and changes, thus increasing the effectiveness of rehabilitation modules (46).

The willingness measurement in the instrument can help tailor the treatment approach based on the level of openness of the user, thereby maximizing their engagement. The perseverance component showed a strong and significant positive relationship with treatment readiness, suggesting that an individual's ability to endure challenges, stress and possible setbacks throughout the recovery process is an important aspect of treatment readiness. This finding is consistent with the literature on psychological perseverance which states that individuals who are able to manage stress and emotional distress are more likely to maintain engagement in treatment for the long term (33-37). Intervention strategies such as coping skills training, stress management and social support development can be implemented to strengthen perseverance in the context of ReDATT. Self-control likely plays a protective role in regulating impulses and preventing relapse. These findings indicate that the ability to control impulses, emotions and risky

behaviors is a key factor in determining an individual's active engagement in treatment and relapse prevention (38-40). Therefore, early intervention should emphasize behavioral impulse management and emotional regulation to increase treatment readiness and support the effectiveness of the recovery process.

In addition to correlation analysis and multiple linear regression analysis was also conducted (47). The combined influence of all components highlights the integrated nature of treatment readiness, thus reinforcing the findings of the correlation analysis. In terms of relative contribution, the perseverance component emerged as among the highest relative contribution followed by willingness, self-control and awareness. These findings indicate that an individual's ability to maintain perseverance in the face of recovery challenges supported by internal motivation is a key factor influencing initial readiness to undergo treatment (48). Overall, the regression analysis indicated significant relative contributions of the four components within the ReDATT framework (49). These findings need to be interpreted in the context of the conceptual structure of ReDATT where treatment readiness is formed through the interaction between key psychological components.

Overall, the study findings indicate that treatment readiness is a multidimensional construct formed through the interaction between awareness, willingness, perseverance and self-control. Each component plays a different but interrelated role. Therefore, drug rehabilitation interventions need to be implemented holistically, psychologically tailored and focused on individual needs. The relatively high levels of treatment readiness observed in this study may also be related to the treatment context and characteristics of the participants, who were receiving rehabilitation services at private rehabilitation centres (50, 26, 51). These findings provide preliminary empirical support for the relevance of the four components within the ReDATT framework. The findings of this study can be applied in drug addiction rehabilitation practices to help rehabilitation centres assess the level of psychological readiness of individuals before treatment begins. Assessment of the components allows for more targeted initial support planning based on the

individual's psychological strengths and weaknesses, thus supporting the effectiveness of treatment. This study contributes to strengthening the understanding that treatment readiness is influenced by several psychological components that are interrelated and need to be assessed comprehensively. From a practical implication perspective, the findings of this study can help rehabilitation centres plan more targeted early interventions based on the individual's psychological profile. In addition, the use of the ReDATT instrument has the potential to increase the effectiveness of early assessment and support the implementation of more systematic treatment strategies in the context of drug addiction recovery.

The findings of this study have practical implications for drug addiction recovery practices. This instrument can help recovery practitioners assess an individual's psychological readiness based on four components. This information can help practitioners identify an individual's psychological strengths as well as aspects that require further support, thus allowing interventions to be planned more targeted according to individual needs and encouraging continued engagement in the treatment and recovery process. The use of instrument also has the potential to support a more systematic initial assessment process and treatment planning in the context of drug addiction recovery.

This study has some limitations in terms of methodology. First, the study sample consisted only of male drug users receiving treatment at private rehabilitation centres, which may limit the generalizability of the findings to female drug users and other treatment populations. Secondly, data was only collected from five private drug rehabilitation centres in Terengganu. Differences in treatment approaches, institutional characteristics and participant profiles in other recovery settings may influence treatment readiness and the usability of the ReDATT instrument. Third, the use of self-administered questionnaires is likely to cause response bias including the tendency for participants to provide more socially acceptable answers. Finally, the specific characteristics of the sample and the rehabilitation centres environment involved may limit the external validity of the study findings.

Future studies are suggested to test the ReDATT

instrument among more diverse populations, geographic locations and treatment settings including female drug users as well as individuals receiving treatment in government centres, communities, rehabilitation institutions and outpatient services. Studies involving larger and more diverse samples are also suggested to further assess the applicability, validity and generalizability of the instrument in different treatment contexts. Longitudinal studies can also be considered to assess stability and changes in the level of treatment readiness throughout the recovery process.

Conclusion

This study indicates that awareness, willingness, perseverance and self-control are significantly associated with treatment readiness among drug users undergoing rehabilitation. The findings indicate that treatment readiness can be understood through the interaction of key psychological components. All ReDATT instrument components showed significant relationships with the level of treatment readiness and made significant relative contributions to treatment readiness within the ReDATT framework. These findings highlight the important role of internal psychological factors in treatment readiness. The practical contribution of this study lies in enabling early assessment of treatment readiness which may assist treatment providers in planning more targeted interventions. Individuals identified with low scores on certain components may benefit from early targeted support to increase treatment acceptance. The use of the ReDATT score profile allows rehabilitation centres to design psychological support strategies that are more aligned with individual needs, thus increasing treatment effectiveness and supporting continued engagement in recovery. The combination of early readiness assessments and targeted psychological support has the potential to reduce the risk of resistance to treatment and increase the likelihood of continued engagement in the recovery process. Overall, treatment readiness should be understood as a multidimensional construct formed through the interaction of several psychological components. Treatment readiness assessment through ReDATT can contribute to a more comprehensive understanding of the psychological state of drug

users at the stage of receiving treatment as well as support more effective recovery efforts in the context of drug addiction.

Abbreviations

AI: Artificial Intelligence, EFA: Exploratory Factor Analysis, KMO: Kaiser-Meyer-Olkin Measure, PCA: Principal Component Analysis, ReDATT: Readiness for Drug Addiction Treatment Test, SPSS: Statistical Package for the Social Sciences, VIF: Variance Inflation Factor.

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Author Contributions

All the authors contributed equally.

Conflict of Interest

None of the co-authors expressed conflict of interest.

Data Availability

The data are available from the corresponding author on a reasonable request.

Declaration of Artificial Intelligence (AI) Assistance

The authors used generative artificial intelligence (AI) tools only for language editing, grammar checking and improving the clarity and readability of the manuscript. The authors have reviewed and verified all AI-assisted content and remain fully responsible for the accuracy, interpretation and final content of the manuscript.

Ethics Approval

Participation in this study was voluntary and informed consent was obtained from all respondents. Formal permission to collect data was obtained from Universiti Sultan Zainal Abidin (UniSZA) and the management of the rehabilitation centres. This study did not involve any clinical intervention.

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