

The Influence of Psychological Components on Treatment Readiness among Drug Users: A Simple Linear Regression Analysis

Norashida, S. R.^{1*}, Lukman, Z. M.²

Faculty of Applied Social Sciences, Universiti Sultan Zainal Abidin, Terengganu, Malaysia

*Corresponding Author

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ABSTRACT

This study used linear regression analysis to examine the influence of four main psychological components, namely awareness, willingness, perseverance, and self-control on treatment readiness among drug users. This study involved 217 male drug users who were undergoing rehabilitation treatment at private rehabilitation centers between July and September 2025. In the sampling procedure, the census sampling method was used by including all individuals who met the participation criteria to ensure maximum coverage of the target population. This sample size is sufficient for the statistical analysis conducted. The results of the study indicate that the reliability analysis demonstrated excellent internal consistency, with three components achieving Cronbach's alpha values exceeding 0.90 and one component exceeding 0.80. The level of treatment readiness was high, with the majority of drug users in the rehabilitation centers in the very ready category (83.40%), followed by the ready category (12.00%), less ready (3.70%), and not ready (0.90%). In addition, regression analysis showed that all four psychological components had a significant influence on the level of treatment readiness. Overall, this study concludes that internal psychological components play an important role in influencing drug users' readiness to receive rehabilitation treatment. The ReDATT instrument, which was developed based on the conceptual framework of the study and supported by previous researchers, was found to be suitable for use as a drug addiction treatment readiness assessment tool and has the potential to increase the effectiveness of recovery interventions in the context of drug addiction treatment.

Keywords: Treatment Readiness, Drug Addiction, ReDATT, Psychological Components, Regression Analysis

INTRODUCTION

Background of the Study

This psychological approach helps treatment providers identify the client's internal strengths and weaknesses to plan more effective interventions. Drug use issues continue to affect the health, safety and social well-being of global communities and remain a major public health problem [59, 63]. Drug addiction negatively impacts individuals, families and communities, and in Malaysia this issue is increasingly worrying among youth [57, 20, 12, 25]. Drug abuse is also associated with physical and mental health problems, crime and a reduced quality of life [21, 39, 52]. The success of treatment is greatly influenced by the client's level of readiness, which includes active engagement, motivational changes, and awareness of the importance of treatment [36, 47, 22]. Low levels of readiness increase the risk of relapse, thus building readiness through specific interventions is crucial to ensuring long-term recovery [18, 10]. Internal psychological factors determine whether an individual is able to maintain recovery or relapse.

Awareness helps individuals understand the impact of addiction on themselves, relationships, and the future, thus building internal motivation for treatment [43]. Willingness refers to the openness to change voluntarily, requiring desire, self-efficacy, and commitment to action, where a lack of internal agreement makes treatment ineffective and increases the risk of relapse [60, 29]. Perseverance allows individuals to maintain motivation, learn from failure, and remain committed despite stress, easy withdrawal, and treatment challenges, thus

supporting ongoing recovery efforts [56, 14, 40, 33]. Self-control plays an important role in recovery, enabling individuals to restrain impulses, control drug cravings, and align behaviour with long-term goals [1, 55]. Psychological interventions that increase self-control can reduce addiction tendencies, while low self-control increases the risk of relapse [37, 7]. The study findings show that awareness, willingness, perseverance, and self-control are the main psychological components that shape the level of treatment readiness of drug users. The ReDATT instrument assesses these four components, which complement each other and interact in influencing behaviour, emotion, and cognition throughout recovery. Therefore, treatment readiness needs to be understood as the result of the interaction of multiple internal psychological strengths, and strengthening all four components simultaneously is essential for increasing the effectiveness of interventions and lasting recovery. Previous studies have mostly examined psychological components in isolation, such as motivation or readiness to change, while approaches that integrate awareness, willingness, perseverance, and self-control are still limited. In addition, many existing instruments are based on Western contexts and are not well suited to the culture and treatment system in Malaysia.

LITERATURE REVIEW

In the context of drug addiction treatment, internal psychological components play an important role in determining the individual's level of readiness to change and maintain recovery [46]. Self-awareness is seen as the main foundation that allows individuals to identify factors contributing to addiction and understand their own emotions, thoughts and behaviors, thus encouraging the formation of internal motivation to change [43, 42, 15]. High awareness is also associated with increased self-reflection and emotional regulation, which helps individuals make more rational decisions in the recovery process [54, 4]. Furthermore, willingness refers to an individual's desire, self-confidence, and commitment to actively engage in the treatment process, which is a key driver of lasting behavioral change [13, 43]. Willingness is also closely related to the concept of intrinsic motivation, where individuals with strong internal drive are more likely to maintain engagement in treatment and achieve more positive recovery outcomes [49, 28]. In addition, perseverance is the individual's ability to maintain effort and emotional stability when faced with treatment challenges, including psychological distress and risk of relapse, thus supporting the continuation of long-term recovery [8, 56]. Perseverance is also related to the concepts of grit and psychological perseverance, which emphasize continued effort and the ability to adapt in difficult situations throughout the recovery process. Finally, self-control refers to an individual's ability to control impulses, emotions, and behaviors to achieve recovery goals, which significantly influences the ability to maintain positive changes and avoid relapse to addiction [1]. Individuals with high levels of self-control are found to be more able to control drug cravings, make adaptive decisions, and maintain discipline in implementing treatment plans [44, 37].

In line with this, the study findings show that the four psychological components measured through the ReDATT instrument, namely awareness, willingness, perseverance and self-control, have a strong, positive and significant influence on the level of treatment readiness. This shows that treatment readiness is not only influenced by external factors such as social or environmental support, but also depends on the individual's internal psychological strength. Awareness helps individuals evaluate the negative effects of addiction and increases motivation to change, while willingness reflects voluntary commitment to the treatment process. Perseverance was identified as the most dominant predictor, illustrating the role of psychological perseverance in facing recovery challenges, while self-control ensures that individuals are able to control impulses and maintain adaptive behavior in the long term. Accordingly, these findings confirm that the ReDATT instrument is a valid, quality measurement tool that is appropriate for the treatment context in Malaysia. Its use has the potential to help rehabilitation centers assess the level of drug users' readiness more accurately, plan more targeted interventions, increase drug users engagement, and contribute to the effectiveness of treatment and reduce the risk of relapse.

METHODOLOGY

Research Design

This study used an exploratory quantitative approach with an emphasis on linear regression analysis to examine the influence of psychological components on the level of readiness for drug addiction treatment. The

quantitative approach was chosen because it provides a systematic and structured method for studying relationships between variables, making predictions and testing hypotheses in various fields including social sciences, economics and health. An exploratory design was chosen because this study involved the use of a new instrument, the Readiness for Drug Addiction Treatment Test (ReDATT), which was developed to assess the level of psychological readiness among drug users. Therefore, this study not only focuses on analyzing the relationships and influences between psychological components through linear regression, but also supports an initial assessment of the psychometric characteristics of the instrument used.

This study was conducted at several private drug rehabilitation centers in the state of Terengganu which provide treatment and rehabilitation services to drug users. The selection of locations was in line with the study objectives because these centers housed clients who were undergoing active treatment and met the study criteria. Apart from that, the selection of location also takes into account factors such as management cooperation and accessibility of the area to ensure the smooth and efficient data collection process. The involvement of various rehabilitation centers allows the study findings to reflect the actual situation of treatment readiness levels in the rehabilitation context in Malaysia [6]. Specifically, this study involved five private drug rehabilitation centers, namely Madrasah Khairul Ihsan (HATI), Perkampungan Darul Barakah (PDB), Baitul Cakna Ajil, Baitul Cakna Kampung Pelandan, Baitul Cakna Jambu Bongkok, Pondok Remaja Inabah, and Rumah Rakan Islah located in the districts of Hulu Terengganu, Marang, Kuala Nerus, and Setiu.

Participants of the Study

The study respondents consisted of 217 male drug users undergoing rehabilitation treatment at private rehabilitation centers. All respondents were selected during the data collection period between July and September 2025. In this study, the number of respondents selected was sufficient to meet the needs of the current study, while 40 respondents were also involved in a pilot study for the purpose of initial testing of the instrument. The respondents consisted of individuals aged 18 years and above, had passed the detoxification phase, and were undergoing a rehabilitation treatment program. Participation in this study was voluntary, where all respondents gave their consent in the study and met the inclusion criteria established by the researcher.

Sampling Techniques

In this study, the researcher employed the census sampling method, which involved all individuals who met the participation criteria to ensure maximum coverage of the target population. This approach is appropriate for exploratory studies of instrument development because it allows for more comprehensive data collection and represents the entire target group. However, the number of drug users at Private Drug Rehabilitation Centers is dynamic and constantly changing due to new admissions, discharges or drug users transfers. Therefore, the researcher carried out continuous monitoring, rescheduled the data collection process when necessary, and worked closely with the management of the rehabilitation centers to ensure that the number of respondents was sufficient and that the study process was carried out systematically and ethically.

Research Instrument

This study used a developed instrument, the Readiness for Drug Addiction Treatment Test (ReDATT). In ensuring the thoroughness of the development of ReDATT, the process of constructing this instrument followed the steps suggested by Miller et al. (2013) which included ten main stages, namely: (1) determining the purpose and main components of the instrument, (2) instrument design, (3) item construction, (4) formation of component measurement scales, (5) revision of instrument items, (6) pilot study, (7) item analysis and instrument improvement, (8) validity and reliability testing, (9) determination of the overall score of the instrument, and (10) preparation of manuals and guides for the use of the instrument. This systematic approach ensured that the ReDATT was developed with theoretical consistency, conceptual clarity and empirical robustness, thus producing a valid, stable and consistent instrument to measure the level of treatment readiness in the context of recovery in Malaysia. The instrument consists of 40 items built on the conceptual framework of treatment readiness that includes four main psychological components, namely awareness, willingness, perseverance and self-control, where each component contains 10 items. 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 scale aims to reduce the tendency to choose neutral answers and encourage clearer assessments.

Data Collection Procedure

Data collection was conducted face-to-face at private drug rehabilitation centers. Before data collection, the researcher obtained permission from the management of the rehabilitation centers. Respondents were given an explanation of the purpose of the study and informed consent was obtained before participation. Questionnaires were distributed to respondents who agreed to participate in the study and collected again after completion. The data collection process was carried out over a period of approximately five days covering five different rehabilitation centers. This period took into account logistical factors, coordination with the central authorities, as well as the time required by each respondent, which is around 45 minutes to complete the questionnaire. The instrument used in this study consisted of four main psychological components, namely awareness, willingness, perseverance, and self-control. These components were measured using a structured questionnaire to assess the level of treatment readiness among drug users undergoing recover.

Ethical Considerations

In this study, all ethical aspects were taken into account to ensure the protection of respondents throughout the study. Informed consent was obtained from the respondents themselves to ensure that participation was voluntary without any coercion. Each respondent was guaranteed not to experience any harm, while confidentiality and anonymity were also maintained. All data collected were kept confidential and only used for research purposes. In addition, the researcher ensured that all information was used ethically and complied with the principles of respondent data protection. Respondents were also free to withdraw at any time without any implications.

Statistical Treatments

Mean Data – This is used to determine the level of each psychological component, namely awareness, willingness, perseverance and self-control, as well as the overall level of treatment readiness.

Standard Deviation – This is used to measure the level of variation or spread of data for each variable in the study.

Reliability Analysis (Cronbach's Alpha) – This is used to assess the internal consistency of each component and the entire ReDATT instrument.

Spearman Correlation Analysis – This is used to identify the relationship between psychological components (awareness, willingness, perseverance and self-control) and the level of treatment readiness.

Simple Linear Regression - Used to study the influence of each psychological component separately (awareness, willingness, perseverance and self-control) on the level of treatment readiness.

RESULT AND DISCUSSIONS

The majority of respondents were in treatment periods of 7–12 months (35.0%) and 0–6 months (23.0%), indicating that most respondents were still in the early to mid-phase of recovery. Respondents were dominated by early to middle adulthood, particularly those aged 24–29 (23.8%), and most began engaging in drugs in their teens to early adulthood, particularly those aged 16–20 (35.5%). In terms of background, the majority of respondents had a secondary school education (67.3%), were single (77.0%), were raised by biological parents (83.9%), were self-employed (47.9%) and came from rural areas (71.4%). The main factors behind drug involvement are curiosity (23.1%) and peer influence (22.4%), with the use of various types of drugs such as syabu, horse pills, heroin and marijuana. More than half of the respondents (57.6%) had never undergone psychological testing related to recovery, thus emphasizing the need to use ReDATT as an initial assessment instrument for treatment readiness. 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 Cronbach's alpha values obtained were 0.949 for

awareness, 0.956 for willingness, 0.970 for perseverance, and 0.898 for self-control. In exploratory studies, 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.

Table 1. Descriptive Statistics of Psychological Components and Level of Treatment Readiness among Drug Users

Component	N	Mean	Standard Deviation	Percentage (%)
Awareness	217	54.1613	9.62620	100
Willingness	217	51.8986	10.55887	100
Perseverance	217	52.4470	10.60740	100
Self-control	217	51.5622	10.39663	100

In addition, the majority of drug users showed a high level of treatment readiness. A total of 83.4% of drug users were in the very ready category, followed by 12.0% in the ready category, while only 3.7% were in the less ready category and 0.9% in the not ready category. Based on the ReDATT components, all components recorded the highest percentage in the very ready category. Based on Table 1, descriptive statistical analysis shows that all psychological components recorded high mean values with a total of 217 drug users for each component. The awareness component recorded the highest mean (M = 54.16, SD = 9.63), followed by willingness (M = 51.90, SD = 10.56), perseverance (M = 52.45, SD = 10.61), and self-control (M = 51.56, SD = 10.40). Overall, these findings indicate that the levels of each component are high and consistent among respondents.

Table 2. Distribution of Treatment Readiness Levels by ReDATT Components (n = 217)

Component	High n (%)	Moderate n (%)	Low n (%)	Very Low n (%)
Awareness	178 (82.0)	29 (13.4)	8(3.7)	2(0.9)
Willingness	181(83.4)	26(12.0)	8(3.7)	2(0.9)
Perseverance	174 (80.2)	31(14.3)	9(4.1)	3(1.4)
Self-control	169 (77.9)	34(15.7)	10(4.6)	4(1.8)

n: Number of responses for each treatment readiness level

In addition, the distribution of responses per item collected using a six-point Likert scale and summarized into low, moderate and high categories is shown in Table 2. The analysis showed that all of these components play an important role in determining the level of individual readiness to begin treatment, in line with the theoretical framework that emphasizes readiness as a multidimensional construct. The high level of readiness across all components of ReDATT was due to participants joining private rehabilitation centres voluntarily, demonstrating an initial commitment to change. Although the majority showed a high level of readiness, there were a small number of participants with moderate or low levels, indicating that the instrument was still able to distinguish differences in individual readiness. The willingness component recorded the highest percentage (83.4%), followed by awareness (82.0%), perseverance (80.2%) and self-control (77.9%). The percentage of clients in the moderate category was higher for the self-control component, while the low and very low categories were minimal for all components Table 2.

Table 3. Correlation between Psychological Components and Treatment Readiness

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	0.809**	0.901**	0.899**	0.912**	1.000

Correlation analysis: all correlation coefficients are significant at $p < .01$ (**).

Based on Table 3 Correlation analysis showed that all psychological components measured through ReDATT had a high and significant positive relationship with drug addiction treatment readiness. This finding provided clear empirical support that the level of treatment readiness is influenced by the internal psychological aspects of the individual. A significant positive correlation was found between ReDATT components and treatment readiness ($p < .01$). Self-control recorded the highest correlation value with treatment readiness ($r = 0.912$), followed by willingness ($r = 0.901$), perseverance ($r = 0.899$) and awareness ($r = 0.809$). In addition, all components also showed a strong relationship with each other with correlation values between 0.659 and 0.836.

Table 4: Linear Regression Analysis of Psychological Components on Treatment Readiness

Component	R	R ²	Adjusted R ²	Std. Error	β	p-value
Awareness	0.850	0.723	0.722	19.502	0.850	<0.001
Willingness	0.917	0.841	0.840	14.794	0.917	<0.001
Perseverance	0.932	0.868	0.867	13.483	0.932	<0.001
Self-Control	0.888	0.789	0.788	17.034	0.888	<0.001

As shown in Table 4, linear regression analysis showed that all four psychological components had a significant influence on drug addiction treatment readiness. The awareness component showed a significant effect ($\beta = 0.850$, $p < 0.001$) with an R² value of 0.723, indicating that 72.3% of the variance in treatment readiness could be explained by awareness. Similarly, the willingness component showed a significant effect ($\beta = 0.917$, $p < 0.001$) with an R² value of 0.841, explaining 84.1% of the variance in treatment readiness. Next, the perseverance component showed the strongest influence ($\beta = 0.932$, $p < 0.001$) with an R² value of 0.868, indicating that 86.8% of the variance in treatment readiness could be explained by this component. Finally, self-control also showed a significant effect ($\beta = 0.888$, $p < 0.001$) with an R² value of 0.789, which explains 78.9% of the variance in treatment readiness. Overall, these findings indicate that all psychological components have a strong, positive, and significant influence on treatment readiness.

DISCUSSION

The profile of respondents, the majority of whom were in the early to mid-stage of treatment and had been involved with drugs since adolescence, shows that early intervention and targeted psychological support are very important in increasing readiness and effectiveness of recovery. This finding is consistent with previous studies showing that peer influence, curiosity and age-related factors are among the main contributors to drug involvement and influence the trajectory of individual recovery [19, 53, 58]. In addition, the majority of respondents who had never undergone a psychological assessment emphasized the importance of using instruments such as the ReDATT as an initial screening tool to systematically assess treatment readiness. This need is supported by studies highlighting that comprehensive initial assessments can assist in planning more accurate interventions and improving the effectiveness of treatment among drug users [5]. The results of the reliability analysis showed that all components of the ReDATT instrument had very high Cronbach's alpha values, exceeding 0.89, indicating excellent internal consistency. This suggests that the items within each component consistently measure the intended construct and demonstrate high stability. This finding is in line with established guidelines stating that Cronbach's alpha values above 0.70 indicate good reliability, while values approaching 1.00 indicate a very high level of consistency [27].

The high mean values across all components indicate that respondents demonstrate a strong level of psychological readiness in terms of cognitive, emotional and behavioral aspects in facing drug addiction treatment. This finding is consistent with previous studies show that high levels of awareness, willingness, perseverance and self-control are associated with better readiness to receive treatment [43, 48, 9]. Furthermore, the moderate standard deviation suggests that the respondent scores are relatively homogeneous, indicating the stability of psychological characteristics within the treatment environment [23]. The study findings showed that the majority of drug users were at a high level of treatment readiness, with 83.4% in the very ready category and only a small proportion at a low level, indicating good psychological readiness among the respondents. This finding is consistent with previous studies that found individuals in treatment settings tend to show higher levels of readiness to change and actively engage in interventions [51, 26, 31, 24].

Based on the components of the ReDATT instrument, all component recorded the highest percentage in the very willing category, with willingness being the most dominant followed by awareness, perseverance and self-control, indicating that intrinsic motivation and emotional readiness are key factors in shaping treatment readiness. This finding is supported by studies showing that intrinsic motivation plays an important role in behavioral change and increasing treatment engagement and effectiveness [50, 35, 2,11]. High awareness reflects the drug user's understanding of the negative effects of addiction and the need to change, while perseverance demonstrates the ability to face challenges throughout the recovery process. This finding is in line with studies that emphasize awareness is an initial step in behavioral change, while perseverance acts as a protective factor against stress and relapse [43, 26, 9, 61, 17]. However, self-control showed a moderately higher percentage compared to other components, indicating that there are still challenges in the aspect of impulse control among drug users. This finding is consistent with studies showing that self-control is a complex aspect and requires continuous training in the addiction treatment process. Overall, these findings confirm that clients have a high level of treatment readiness and are supported by internal psychological strength, thus demonstrating that the ReDATT instrument is able to assess treatment readiness effectively and is relevant in the context of drug addiction recovery [32, 44, 34].

Correlation analysis showed that all psychological components measured through the ReDATT instrument had a high and significant positive relationship with the level of drug addiction treatment readiness ($p < .01$). These findings indicate that treatment readiness is a multidimensional construct that is significantly influenced by internal psychological factors of the individual. Previous studies showing that treatment readiness is closely related to levels of self-awareness, motivation, and behavioral regulation among drug users [38]. The high and significant relationship between all psychological components and treatment readiness indicates that the readiness to undergo treatment is influenced by internal psychological factors of the individual. This finding is in line with previous studies that show that treatment readiness is closely related to the level of self-awareness, motivation and behavioral regulation among drug users. The highest correlation for self-control suggests that the ability to control impulses and behavior is an important factor in determining willingness to change. This finding is supported by studies showing that individuals with high levels of self-control are more likely to adhere to treatment and maintain behavioral changes in the long term [55, 1].

In addition, the strong relationship between willingness and treatment readiness emphasizes the importance of intrinsic motivation in the recovery process. Individuals with high willingness are more likely to actively engage in treatment and maintain commitment throughout the recovery process [58]. Findings for perseverance suggest that psychological perseverance plays an important role in helping individuals face challenges and reduce the risk of relapse throughout treatment [41]. Overall, the findings of this study are consistent with various previous studies that have proven that internal psychological factors play a major role in determining treatment readiness and drug addiction recovery success. Therefore, the ReDATT instrument can be considered a valid and relevant measurement tool in assessing treatment readiness and has the potential to be widely used in the context of drug addiction recovery in Malaysia [64].

Linear regression analysis showed that awareness, willingness, perseverance and self-control had a positive and significant influence on the level of treatment readiness among drug users. This finding indicates that treatment readiness is a multidimensional construct built through the interaction between cognitive, emotional and behavioral dimensions. This framework is in line with the theory of behavioral change which emphasizes that change occurs as a result of the integration of individual thought, emotional and action processes [43, 46]. From the cognitive dimension, awareness functions as the main foundation that triggers readiness to change by enabling individuals to understand the effects of addiction and assess the need for treatment. Individuals with high levels of awareness are more likely to develop a rational understanding of their behavior and increase self-efficacy in controlling change. Therefore, awareness can be considered as an initial driver that activates the change process in the recovery trajectory.

From the emotional dimension, willingness reflects the affective readiness and intrinsic motivation of the individual to change voluntarily without coercion [55]. High willingness allows individuals to show active involvement in treatment, accept interventions openly, and maintain commitment throughout the recovery process [43, 30, 3]. This indicates that the emotional dimension plays an important role in transforming intentions into actual commitment in treatment. From the action (behavioral) dimension, perseverance and self-control

function as implementation mechanisms that ensure that changes can be maintained in the long term. Perseverance reflects psychological that helps individuals cope with stress, challenges, and the risk of relapse throughout treatment [16]. Perseverance individuals are more able to maintain emotional stability and continue treatment despite difficulties [62]. At the same time, self-control plays an important role in controlling impulses, emotions, and behavior, thus ensuring compliance with the treatment structure. Self-control also allows individuals to maintain discipline and avoid relapse to addictive behavior. Overall, these findings confirm that initial treatment readiness cannot be explained by a single dimension, but is the result of an integration between cognitive (awareness), emotional (willingness), and behavioral (perseverance and self-control) processes.

This integration not only supports the theoretical basis of the ReDATT, but also provides empirical evidence that a multidimensional approach is more accurate in understanding drug user readiness for treatment. This study contributes theoretically by proposing an integrated framework of four psychological components in assessing treatment readiness. From a practical perspective, the developed instrument can help counselors and practitioners plan more accurate interventions and increase the effectiveness of recovery programs. This study only involved male respondents and focused on private rehabilitation centers, therefore the findings may not be representative of the entire population and context of drug addiction treatment in Malaysia. However, the findings of this study need to be interpreted in the context of its implementation. This study involved male respondents from private rehabilitation centers, in line with the availability of the population at the study location. Therefore, these findings are better understood in that context. However, the findings showed significant relationships and high scores, thus supporting the important role of psychological components in influencing readiness to receive treatment.

CONCLUSIONS AND RECOMMENDATIONS

Overall, this study proves that awareness, willingness, perseverance and self-control have a strong, positive and significant influence on drug addiction treatment readiness, thus emphasizing the dominant role of internal psychological factors over external factors. These four components function integratively, where awareness triggers change, willingness strengthens intrinsic motivation, perseverance supports perseverance in the face of challenges, and self-control ensures compliance and sustainability of behavior. This finding is in line with the theory of behavioral change which emphasizes the interaction of cognitive, emotional and behavioral dimensions in the recovery process. In addition, this study confirms that the ReDATT instrument is a valid, reliable and relevant measurement tool in the context of drug addiction treatment in Malaysia. Its use has the potential to help rehabilitation centers assess the level of client readiness more comprehensively, plan more targeted and individualistic interventions, and increase client involvement in treatment. Indirectly, this approach can contribute to increasing the effectiveness of recovery programs and reducing the risk of relapse in the long term.

Recommendations

The following suggestions can be made in light of the study's findings. Future research should address the limitations of the current study by expanding the diversity of the sample and strengthening the validation of the instrument.

1. Further research is proposed to conduct Confirmatory Factor Analysis (CFA) for the purpose of validating the factor structure of the ReDATT instrument that has been developed through Exploratory Factor Analysis (EFA). This CFA analysis is important to assess the suitability of the four-factor structure, namely awareness, willingness, perseverance and self-control based on empirical data. In addition, CFA can test the level of fit indices and confirm the construct validity of the instrument more strongly. This approach ensures that the ReDATT has a stable factor structure and is suitable for use in the context of the study population.
2. Future studies are recommended to use a longitudinal design to assess changes in the client's level of psychological readiness from the initial phase to the end of treatment. This approach can show changes in readiness over time as well as identify patterns of motivational changes throughout the recovery process. In addition, it also allows for assessment of whether the initial ReDATT score can predict treatment success and the risk of relapse after leaving the rehabilitation centers.

3. ReDATT efficacy testing is proposed to be conducted in various treatment contexts, particularly in government and private rehabilitation centers. This step aims to ensure cross-contextual validity and consistency of the instrument in assessing clients' psychological readiness in different treatment environments. The results of this study can also be used to compare readiness profiles between clients in government and private rehabilitation centers.
4. Future studies are encouraged to use qualitative approaches to understand the psychological experiences, motivations, and actual challenges faced by clients while undergoing treatment. Methods such as in-depth interviews or focus group discussions can provide a more comprehensive picture of the subjective meaning of awareness, willingness, perseverance and self-control from the client's own perspective. The combination of quantitative and qualitative methods (mixed methods approach) can increase ecological validity and enrich understanding of the phenomenon of treatment readiness in the environmental context of Malaysia.
5. Further studies are recommended to develop a protocol for implementing ReDATT as an official instrument in the national-level initial screening process. This integration will allow the collection of large-scale psychological data to produce a national profile of drug users' readiness. This data is important for policy planning, allocation of treatment resources, and evaluating the effectiveness of rehabilitation programs based on scientific evidence.
6. Further research is recommended to develop ReDATT based training modules for rehabilitation officers, counselors and psychologists. This module emphasizes skills in assessing psychological readiness as well as strategies for increasing client awareness, willingness, perseverance and self-control. This training can help implement more systematic and evidence-based interventions. Overall, this proposal aims to strengthen the validity and usability of ReDATT as well as improve the quality of drug rehabilitation practices in Malaysia.

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REFERENCES

1. Brown, J. D., & Marshall, M. A. (2001). Self-esteem and emotion: Some thoughts about feelings. *Personality and Social Psychology Bulletin*, 27(5), 575–584. <https://doi.org/10.1177/0146167201275006>
2. Best, D., Beckwith, M., Haslam, C., Haslam, S. A., 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 & Theory*, 24(2), 111–123. <https://doi.org/10.3109/16066359.2015.1075980>
3. Best, D., Irving, J., & Albertson, K. (2016). Recovery and desistance: What the emerging recovery movement in the alcohol and drug area can learn from models of desistance from offending. *Addiction Research & Theory*, 25(1), 1–10.
4. Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, 84(4), 822–848. <https://doi.org/10.1037/0022-3514.84.4.822>
5. Carroll, K. M., & Kiluk, B. D. (2017). Cognitive behavioral interventions for alcohol and drug use disorders: Through the stage model and back again. *Psychology of Addictive Behaviors*, 31(8), 847–861. <https://doi.org/10.1037/adb0000311>
6. Chong, S. T., Kaur, J., & Singh, P. (2020). Factors influencing drug rehabilitation outcomes among drug addicts in Malaysia. *Malaysian Journal of Social Sciences and Humanities*, 5(3), 45–55.
7. Conner, K. R., Pinquart, M., & Gamble, S. A. (2009). Meta-analysis of depression and substance use among individuals with alcohol use disorders. *Journal of Studies on Alcohol and Drugs*, 70(2), 191–201. <https://doi.org/10.15288/jsad.2009.70.191>

8. Connor, K. M., & Davidson, J. R. T. (2003). Development of a new resilience scale: The Connor-Davidson Resilience Scale (CD-RISC). *Depression and Anxiety*, 18(2), 76–82. <https://doi.org/10.1002/da.10113>
9. Cohn, M. A., Fredrickson, B. L., Brown, S. L., Mikels, J. A., & Conway, A. M. (2009). Happiness unpacked: Positive emotions increase life satisfaction by building resilience. *Emotion*, 9(3), 361–368. <https://doi.org/10.1037/a0015952>
10. Dearing, J. W., & Cox, J. G. (2018). Diffusion of innovations theory, principles, and practice. *Health affairs*, 37(2), 183-190.
11. Deci, E. L., & Ryan, R. M. (2008). Self-determination theory: A macro theory of human motivation, development, and health. *Canadian Psychology*, 49(3), 182–185. <https://doi.org/10.1037/a0012801>
12. Department of Statistics Malaysia. (2022). Statistics on drug abuse in Malaysia 2022. Department of Statistics Malaysia.
13. DiClemente, C. C., Schlundt, D., & Gemmell, L. (2004). Readiness and stages of change in addiction treatment. *The American Journal on Addictions*, 13(2), 103–119.
14. Du Plessis, J., Temane, A., & Poggenpoel, M. (2024). Lived experiences of adults' non compliance with psychiatric medication for depression. *South African Journal of Psychiatry*, 30(1), 1-8.
15. Eurich, T. (2017). *Insight: Why we're not as self-aware as we think, and how seeing ourselves clearly helps us succeed at work and in life*. Crown Business.
16. Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, 56(3), 218–226. <https://doi.org/10.1037/0003-066X.56.3.218>
17. Fletcher, D., & Sarkar, M. (2016). Mental fortitude training: An evidence-based approach to developing psychological resilience for sustained success. *Journal of Sport Psychology in Action*, 7(3), 135–157. <https://doi.org/10.1080/21520704.2016.1255496>
18. Haghghi, J., Rahimi, A., & Ghasemi, M. (2018). The effect of self-control training on drug relapse prevention among adolescents. *Journal of Substance Use and Addiction Research*, 23(2), 101–110.
19. Hawkins, J. D., Catalano, R. F., & Miller, J. Y. (1992). Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. *Psychological Bulletin*, 112(1), 64 –105. <https://doi.org/10.1037/0033-2909.112.1.64>
20. Hazani, M. Z., Sulaiman, W. S. W., Hashim, R., & Amin, A. S. (2022). Psychological readiness and motivation for treatment among drug users in rehabilitation centres in Malaysia. *Journal of Substance Use*, 27(4), 402–409.
21. Hinson-Enslin, A. M., Nahhas, R. W., & McClintock, H. F. (2022). Vision and hearing loss associated with lifetime drug use: NHANES 2013–2018. *Disability and Health Journal*, 15(2), 101286. <https://corescholar.libraries.wright.edu/comhth/496>
22. Howells, K., & Day, A. (2003). Readiness for anger management: Clinical and theoretical issues. *Clinical Psychology Review*, 23(2), 319–337.
23. Hser, Y. I., Evans, E., Huang, D., & Anglin, M. D. (2015). Long-term outcomes after randomization to buprenorphine/naloxone versus methadone in a multi-site trial. *Addiction*, 111(4), 695–705. <https://doi.org/10.1111/add.13238>
24. Hubbard, R. L., Craddock, S. G., & Anderson, J. (2003). Overview of 5-year follow-up outcomes in the Drug Abuse Treatment Outcome Studies (DATOS). *Journal of Substance Abuse Treatment*, 25(3), 125–134. [https://doi.org/10.1016/S0740-5472\(03\)00130-2](https://doi.org/10.1016/S0740-5472(03)00130-2)
25. Ismail, R., Abdul Manaf, M. R., Hassan, M. R., Mohammed Nawi, A., Ibrahim, N., Lyndon, N., Amit, N., Zakaria, E., Abd Razak, M. A., Zaiedy Nor, N. I., Shukor, M. S., & Kamarubahrin, A. F. (2022). Prevalence of drug and substance use among Malaysian youth: A nationwide survey. *International Journal of Environmental Research and Public Health*, 19(11), 6754.
26. Joe, G. W., Simpson, D. D., & Broome, K. M. (1999). Retention and patient engagement models for different treatment modalities in DATOS. *Drug and Alcohol Dependence*, 57(2), 113–125. [https://doi.org/10.1016/S0376-8716\(99\)00088-5](https://doi.org/10.1016/S0376-8716(99)00088-5)
27. Johnson, B., & Christensen, L. (2024). *Educational research: Quantitative, qualitative, and mixed approaches* (8th ed.). SAGE Publications.
28. 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>

29. Kelly, J. F., Stout, R. L., Magill, M., Tonigan, J. S., & Pagano, M. E. (2011). Spirituality in recovery: A lagged mediational analysis of Alcoholics Anonymous' principal theoretical mechanism of behavior change. *Alcoholism: Clinical and Experimental Research*, 35(3), 454–463. <https://doi.org/10.1111/j.1530-0277.2010.01362.x>
30. Kelly, J. F., Bergman, B. G., Hoepfner, B. B., Vilsaint, C. L., & White, W. L. (2020). Prevalence and pathways of recovery from drug and alcohol problems in the United States population. *Addiction Research & Theory*, 28(3), 252–262. <https://doi.org/10.1080/16066359.2019.1581660>
31. Kelly, J. F., Greene, M. C., & Bergman, B. G. (2012). Beyond abstinence: Changes in indices of quality of life with time in recovery in a nationally representative sample of U.S. adults. *Alcoholism: Clinical and Experimental Research*, 36(7), 1219–1228. <https://doi.org/10.1111/j.1530-0277.2011.01721>
32. Koob, G.F. and Volkow, N.D. (2016) Neurobiology of Addiction: A Neurocircuitry Analysis. *The Lancet Psychiatry*, 3, 760-773. [https://doi.org/10.1016/s2215-0366\(16\)00104-8](https://doi.org/10.1016/s2215-0366(16)00104-8)
33. Kolodny-Goetz, J., Hamm, D. W., Cook, B. S., & Wandersman, A. (2021). The readiness, resilience and recovery tool: an emerging approach to enhance readiness amidst disruption. *Global Implementation Research and Applications*, 1(2), 135-146.
34. Laudet, A. B. (2007). What does recovery mean to you? Lessons from the recovery experience for research and practice. *Journal of Substance Abuse Treatment*, 33(3), 243–256. <https://doi.org/10.1016/j.jsat.2007.04.014>
35. Laudet, A. B., & White, W. L. (2008). Recovery capital as prospective predictor of sustained recovery, life satisfaction, and stress among former poly-substance users. *Substance Use & Misuse*, 43(1), 27–54. <https://doi.org/10.1080/10826080701681473>
36. Livet, M., Yannayon, M., Richard, C., & Wandersman, A. (2020). Bridging the gap between prevention research and practice: The interactive systems framework for dissemination and implementation. *American Journal of Community Psychology*, 65(3–4), 267–279.
37. Longshore, D., Chang, E., Hsieh, S. C., & Messina, N. (2004). Self-control and youth substance use: The mediating effects of peer institutions. *Journal of Drug Issues*, 34(3), 443.
38. Magill, M., Ray, L., Kiluk, B., Hoadley, A., Bernstein, M., Tonigan, J. S., & Carroll, K. (2019). A meta-analysis of cognitive-behavioral therapy for alcohol or other drug use disorders: Treatment efficacy by contrast condition. *Journal of Consulting and Clinical Psychology*, 87(12), 1093–1105.
39. Marino, E. N., Jha, M. K., Minhajuddin, A., Ayvaci, E. R., Levinson, S., Pipes, R., Emslie, G. J., & Trivedi, M. H. (2024). Problematic substance use in depressed adolescents: Prevalence and clinical correlates. *Addictive Behaviors Reports*, 19, 100539.
40. Marlatt, G. A., & Donovan, D. M. (Eds.). (2005). *Relapse Prevention: Maintenance Strategies In The Treatment of Addictive Behaviors*. Guilford press.
41. Mhaidat, I., Al-Yateem, N., Al-Mamari, S., & Al-Suwaidi, F. (2024). Resilience and relapse risk in Emirate adult patients with substance use disorder: A national cross-sectional study from the United Arab Emirates. *Frontiers in Psychiatry*, 15, Article 1444233. <https://doi.org/10.3389/fpsy.2024.1444233>
42. Miller, W. R., & Rose, G. S. (2009). Toward a theory of motivational interviewing. *American Psychologist*, 64(6), 527–537. <https://doi.org/10.1037/a0016830>
43. Miller, W. R., & Rollnick, S. (2013). *Motivational interviewing: Helping people change* (3rd ed.). Guilford Press.
44. Norberg, M. M., Olivier, J., Alperstein, D. M., Zvolensky, M. J., & Norton, A. R. (2018). Adverse consequences of student drinking: The role of sex, social anxiety, and drinking motives. *Addictive Behaviours*, 87, 90–97. <https://doi.org/10.1016/j.addbeh.2018.06.019>
45. Paudac, C. M. L., Nonoy, J. M. K., Razonado, C. G. S., Salimbangon, R. H. M., Allanic, E. A., & Cuevas, J. F., Jr. (2025). The relationship between self-efficacy and motivation to abstinence among drug surrenderees towards community-based rehabilitation program. *International Journal of Research and Innovation in Social Science (IJRISS)*. <https://doi.org/10.47772/IJRISS.2024.8120193>
46. Prochaska, J. O., & DiClemente, C. C. (1983). Stages and processes of self-change of smoking: Toward an integrative model of change. *Journal of Consulting and Clinical Psychology*, 51(3), 390–395. <https://doi.org/10.1037/0022-006X.51.3.390>
47. Proctor, E. K., Landsverk, J., Aarons, G., Chambers, D., Glisson, C., & Mittman, B. (2011). Implementation research in mental health services: An emerging science with conceptual,

- methodological, and training challenges. *Administration and Policy in Mental Health and Mental Health Services Research*, 38(1), 24–34. 12.
48. Ryan, R. M., Patrick, H., Deci, E. L., & Williams, G. C. (2008). Facilitating health behaviour change and its maintenance: Interventions based on self-determination theory. *The European Health Psychologist*, 10(1), 2–5.
 49. Robinson, T. E. & Berridge, K. C. (2003). Addiction. *Annual Review of Psychology*, 54, 25-53.
 50. <http://dx.doi.org/10.1146/annurev.psych.54.101601.145237>
 51. Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25(1), 54–67. <https://doi.org/10.1006/ceps.1999.1020>
 52. Simpson, D. D., & Joe, G. W. (1993). Motivation as a predictor of early dropout from drug abuse treatment. *Psychotherapy: Theory, Research, Practice, Training*, 30(2), 357–368. <https://doi.org/10.1037/0033.3204.30.2.357>
 53. Sontate, K. V., Rahim Kamaluddin, M., Naina Mohamed, I., Mohamed, R. M. P., Shaikh, M. F., Kamal, H., & Kumar, J. (2021). Alcohol, aggression, and violence: From public health to neuroscience. *Frontiers in Psychology*, 12, 699726.
 54. Steinberg, L. (2008). A social neuroscience perspective on adolescent risk-taking. *Developmental Review*, 28(1), 78–106. <https://doi.org/10.1016/j.dr.2007.08.002>
 55. Sutton, S. (2016). Stage theories of health behavior. In M. Conner & P. Norman (Eds.), *Predicting and changing health behaviour: Research and practice with social cognition models* (3rd ed., pp. 223–275). Open University Press.
 56. Tangney, J. P., Baumeister, R. F., & Boone, A. L. (2004). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of Personality*, 72 (2), 271–324. <https://doi.org/10.1111/j.0022-3506.2004.00263.x>
 57. Ungar, M. (2011). The social ecology of resilience: addressing contextual and cultural ambiguity of a nascent construct. *American journal of orthopsychiatry*, 81(1), 1.
 58. Unibol, B., & Hizli Sayar, G. (2021). Readiness to change and its relationship with treatment outcomes in substance use disorder. *Addictive Behaviors Reports*, 14, 100356.
 59. United Nations Office on Drugs and Crime. (2021). *World drug report 2021*. United Nations. <https://www.unodc.org/unodc/en/data-and-analysis/wdr2021.html>
 60. UNODC. (2023). *World Drug Report 2023*. United Nations Office on Drugs and Crime.
 61. Van der Stel, J. (2020). *Herstel als leerproces*. SWP.
 62. Wagnild, G. M., & Young, H. M. (1993). Development and psychometric evaluation of the Resilience Scale. *Journal of Nursing Measurement*, 1(2), 165–178.
 63. Windle, G. (2011). What is resilience? A review and concept analysis. *Reviews in Clinical Gerontology*, 21(2), 152–169.
 64. World Health Organization. (2024). *World health statistics 2024: Monitoring health for the SDGs, sustainable development goals*. <https://iris.who.int/bitstream/handle/10665/376869/9789240094703-eng.pdf>.
 65. Zaher, A., Mourad, G., & Ibrahim, F. (2025). Relapse risk, frustration tolerance, and motivational readiness for change in substance use disorders. *BMC Psychology*, 13(1), Article 1329. <https://doi.org/10.1186/s40359-025-03560-9>