Environmental Impact on Relapse and Motivation Recovery Among Drug Addicts

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Abstract: Drug abuse has been proven to be a mental disorder because of the heavy intake of substances usage controlled by the environment. Environmental factors play a significant role in drug addiction and recovery. However, there is a knowledge gap regarding environmental factors contributing to relapse and hinder motivation for recovery among drug addicts in Malaysia. Therefore, the objective of this research is to find out the impact of the environment on drug relapse and motivation for recovery in former addicts. For this purpose, a cross-sectional research design was utilized, whereby a self-administered questionnaire was randomly distributed among 50 Malaysian drug addicts. Data were analysed through IBM SPSS software version 25.0, and the partial least squares structural equation modelling (PLS-SEM) approach supported by Smart-PLS 3.3 to analyse the research model. The findings of the study indicated that the environment significantly impacts motivation recovery and relapse. Furthermore, the positive environment influences motivation for recovery in former addicts and pushes the addicts to relapse after rehabilitation. The study will provide insights into the environmental factors that contribute to drug addiction and relapse in Malaysia.

Keywords: Environment, Family, Motivation Recovery, Relapse, Mental Health

1. Introduction

Drug addiction is a complex and chronic disorder that affects individuals, families, and communities around the world. According to the World Drug Report, United Nations Office on Drugs and Crime (UNODC, 2021), an estimated 275 million people used drugs at least once in the previous year, with 36.3 million suffering from drug use disorders. Drug addiction is a significant public health issue in Malaysia, affecting individuals, families, and communities across the country. According to the National Anti-Drug Agency (NADA) of Malaysia, 26240 drug addicts registered for treatment in 2019, 58% of them were under the age of 39 years of age. Drug addiction is a chronic relapsing disorder that often requires ongoing treatment and support to achieve and maintain recovery.

Drug addiction in Malaysia, according to the Department of Statistics of Malaysia, is at an alarming level (MDS, 2022). Drug addiction has been defined as a psychological disorder in which an individual misuses drugs and, as a result, the addict faces mental instability (Martini et al., 2022). A rapid increase in drug relapse has been found overwhelmingly in the Malaysian population from 2010 to 2015; 34,209 cases of drug relapse have been registered by the National Anti-Drug Agency (NADA) (Shafie et al., 2018). The 2018 report by the National Anti-Drug Agency (AADK) on drug addict statistics shows that the number of new cases in Malaysia is 17,474, and the number of repeat cases is 7,793. Although statistics from 2010 to 2016 show the number of new addicts each year was between 10,301 and 22,923 people. In contrast, the number of repeat addicts in the same period ranged from 4,800 to 8,172 people.

Furthermore, Ismail et al. (2022) proposed that most Malaysian young people (5.5%) of the total population of 11,129,316 are addicted to drugs and substance use, while the majority of Malaysians (3.5%) aged 15–40 years have been taking drugs over the past 30 years. Previously, Garcia et al. (2020) suggested that parents and children know about the serious consequences of taking drugs. However, feelings of 'not being respected or recognised by others' or 'not being treated affectionately by

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parents' could also be the reasons for taking drugs excessively. The irony is that the long-term effects of drug abuse have always been ignored. Zainudin et al. (2022) concluded that the number of cases of drug abuse has substantially risen over the past decade; youngsters and children are being affected by the menace of drugs. Furthermore, Shafi and Ramasamy (2021) reported that according to the new figures of the National Anti-Drug Agency Malaysia in 2019, a considerable number of young people (2015), ranging from 19 to 39 years, have been detected as addicts, as they never had a good relationship with family members. Therefore, they took drugs as a remedy for their grief.

Identifying factors that influence relapse and motivation for recovery among drug addicts in Malaysia is crucial to improving treatment outcomes and reducing the burden of drug addiction on individuals and society. Previous research has shown that environmental factors, such as the availability and accessibility of drugs, peer pressure, and lack of social support, contribute to drug addiction and relapse in Malaysia (Azmi et al., 2018). In addition, social and cultural factors, such as stigmatization and discrimination, may hinder motivation for recovery among drug addicts (Wogen & Restrepo, 2020; Grodin et al., 2019).

Furthermore, the high risk of relapse in drug use is a critical challenge in drug addiction treatment (Haghighi et al., 2018). Relapse is defined as a return to substance use following a period of abstinence from an addiction, and various circumstances influence it. The significant prevalence of substance use relapse has been documented in numerous studies. In a survey conducted by Haghighi et al. (2018), more than 80% of addicts reverted to substance use after six months of stopping. According to a study conducted by Shafiee et al. (2014), 72% of addicts treated in addiction treatment clinics reverted to substance use within one year of quitting the addiction. Nunes et al. (2018) found that six months following standard therapy, the recurrence rate was substantial in all treatment initiation settings, for instance, short-term hospitalization (77 %), long-term hospitalization (59 %), and outpatient (61%). According to studies, various factors have been implicated in the beginning, persistence, and relapse of addiction after treatment. Fallahzadeh and Hosseini (2006) found that multiple circumstances, such as addicted peers, family ignorance, and returning to prior settings, can help people relapse. A study by Deepti et al. (2014) found that friends played a crucial role in substance use relapse. Individual, family, occupational, and economic factors, according to Afkar et al. (2017), are the most critical determinants of substance use relapse.

Various studies have indicated different contributing factors to drug relapse attitudes in former addicts (Barhoumi & Algharbawi, 2021; Navanethan et al., 2021; Maegley, 2022). These indicators have highlighted the environmental role in drug relapsing, such as lack of social adjustment, unequal access to economic opportunity, and extensive attention to substance usage Erdoğan et al.,2021; de Vogel, 2021; Xu, Zhang & Luo, 2021). On the contrary, drug relapse may also include other environmental barriers, such as lack of exposure to available rehabilitation services (Strang, 2020), waiting for a longer time in rehabilitation centres (Brown, O'Donnell, & Casalino, 2020), expensive medical tests (Carvalho et al., 2019), and stigmatization in the community (Fox et al., 2015).

To address the impact of the environment on drug addiction and recovery in Malaysia, various initiatives and programs have been implemented, such as the National Strategic Plan on Drug Control and the Community-Based Rehabilitation Program (Mustapha, Harith, & Tuan, 2020). However, there is a need for further research to identify specific environmental factors that contribute to drug addiction and relapse in Malaysia and to develop targeted interventions to address these factors and promote recovery. Understanding the impact of the environment on drug addiction and recovery in Malaysia is essential to improve the effectiveness of drug addiction treatment and prevention programmes in the country. Previous research has shown that environmental factors play a significant role in drug addiction and recovery. However, there is a gap in knowledge about the specific environmental factors that contribute to relapse and hinder motivation for recovery among drug addicts in Malaysia (for example, Amat et al., 2020; Shaari, 2021). Therefore, it is necessary to fill this knowledge gap by investigating the specific environmental factors that contribute to relapse and hinder motivation for recovery among drug addicts in Malaysia. This can inform the development of targeted interventions to address these factors and improve treatment outcomes.

Addressing this knowledge gap is crucial to developing targeted interventions to address these factors and improve treatment outcomes. Therefore, the research questions that the study aims to answer are: What is the relationship between environmental factors and relapse among drug addicts in Malaysia? How do environmental factors impact motivation for recovery among drug addicts in Malaysia? By addressing these research questions, the study aims to provide insights into the specific environmental factors that contribute to drug addiction and relapse in Malaysia and inform the development of targeted interventions to improve treatment outcomes and promote recovery.

Understanding the impact of environmental factors on relapse and motivation for recovery among drug addicts is critical to developing effective treatment and prevention strategies in Malaysia. By identifying specific environmental factors that contribute to relapse and hinder recovery motivation, interventions can be tailored to address these factors and improve treatment outcomes for drug addiction. Moreover, the potential contributions of this study to the field of drug addiction research in Malaysia are significant. Overall, understanding the impact of the environment on relapse and motivation for recovery among drug addicts in Malaysia is crucial for the

development of effective interventions that address the specific needs of this population. The potential contributions of this study to drug addiction research in Malaysia underscore its importance and significance.

2. Literature Review

2.1 Environment Impact on Motivation Recovery

All Finch et al. (2018) demonstrated that drug abuse is a significant problem in modern society. Approximately 1.23 million adolescents between the ages of 12 and 17 were reported as former drug addicts during 2015, and of these drug addicts, 198,000 addicts received rehabilitation precautions. However, these rehabilitation programmes do not provide a sure recovery from the daily life of former addicts. Recovery motivation is widely considered a significant element in rehabilitation. Fewer studies have indicated that rehabilitation is based on one's motivation to recover. There are many indicators of recovery motivation among drug relapses, such as mental health, self-determination, family support, and societal support (Fauziah et al., 2010; Skeen et al., 2019). A recent study discovered that environmental support directly linked former addicts' patience level and readjustment (Harris Jr., 2019). Despite the intimacy of a friend's circle, studies have discovered that only a friend's circle can motivate the former addict to recover (Eddie et al., 2019).

Fauziah et al. (2010) suggested that motivational readiness motivates support from being free from drugs and relapse. The results showed mixed responses. On the one hand, respondents showed strong motivation to get rid of drug addiction (Pelissier & Jones, 2006). In contrast, a few respondents behaved contrary to the positive role motivation and remained uncertain about better controlling themselves from drugs. On the other hand, DeJong et al. (2022) proposed that although the rate of substance use disorder (SUD) in America is very high (20.1 million) where only 6.9% receive treatment in which local supportive environment, for instance, a friendly home environment and comfortable rehabilitation environment are a practical source of quick recovery from SUD. Furthermore, Kosteniuk et al. (2021) highlighted that although rehabilitation centres are considered high-risk environments for drug abusers, it would be a convenient strategy to provide hospital-based supervised consumption services (SCS) to reduce the level of drug addiction and increase patient care simultaneously.

Similarly, Reif et al. (2014) and Bassuk et al. (2016) stated that informal relationships, flexible therapeutic relationships, and societal acceptance increase consultation maintenance, recovery motivation, and higher treatment satisfaction among drug relapses (Hiller et al., 2002). Additionally, improved relationships among parents, friends and siblings have also proven crucial in increasing and decreasing recovery motivation in former addicts (Caspi et al., 2018). Afterwards, in other environmental motivational recovery factors, religion and spirituality play a significant role. Beraldo et al. (2018) conceived and discussed that spirituality could be helpful for former addicts to adjust their socio-cultural indicators, such as socialization and family bonds, which increases their ability to cope with drug abuse disorder (Feldman & Teller, 2022). Spirituality is referred to as providing the objective of life and the self-characteristics that motivate former addicts to cope with several problems.

Pantazis et al. (2021) provided evidence that the environment triggers motivation to get drugs, especially when it has been closely observed that when the condition of the drug abuser is linked with withdrawal (conditional withdrawal) and generates a desire to take the drug while terminating conditioned withdrawal (conditioned negative reinforcement). Furthermore, Polcin et al. (2021) described the efficacy of the term recovery capital, which signifies the internal and external resources which facilitate the addicted person to overcome drug disorders. In addition, the social environment and personal motivation were found to correlate with recovery capital. Moreover, Sari, Fatah and Nurmala (2021) elaborated on the fact that drug abuser faces both mental and physical because of the influential environmental role of taking drugs. The findings suggested that family can be a motivational factor for drug abusers. The family may provide emotional and social support to the patient for their betterment, but it would be difficult with the family's environmental change.

According to Chen's (2006) research on social support, spirituality, and addiction recovery programmes, social support from the local community through former drug users' meetings in conjunction with integration into society and spirituality programmes is essential to reduce the adverse effects of the formation pressure encountered during the recovery process (Ikanovitasari, Anindhita, & Sefa, 2021). It indicates that society should support drug users through social and physical help and give them jobs, if necessary so that they have the confidence to continue to change and eventually quit drugs. In a study of 206 addicts, Dobkin et al. (2002) discovered that addicts with limited societal support have more significant psychological problems, including depression. A busy and chaotic daily life also raises the likelihood of relapse three to six months after therapy is completed (Ryan & Deci, 2008). It suggests that the lack of social support after treatment ends adds stress to their lives and has an impact on the addicts' psychological struggles. Psychological stress makes it difficult for individuals to socialise in their new surroundings, which can increase their chances of relapsing (Rampersad, 2017). In their study, Greenberg et al. (1998) discovered that relatives who do not assist in the reintegration process of former addicts become a risk factor that increases the likelihood of recurrence. It is because family is a backdrop that impacts an individual's positive development and can influence their behaviour. In their study, Simons et al. (1998) discovered that a lack of familial support caused former drug addicts to feel alone and rejected, increasing their desire to relapse. In their study titled "The Public Stigma of Mental Illness and Drug Addiction: Findings from a Stratified Random Sample," Corrigan et al. (2009) discovered that the chance of relapse increases within six months after leaving a

de-addiction centre due to a lack of support from their environment. In their study titled Measurement of Factors Influencing Addiction Relapse: A factor analysis, Afkar et al. (2017) found that individual, familial, societal, cultural, and economic aspects were shown to be the most relevant regarding addiction relapse in the study.

Birtel, Wood and Kempa (2017) emphasized how social support can help reduce the feelings of stigma and shame among drug abusers. They concluded that poor sleep, anxiety, higher depression, and lower self-esteem result from perceived stigma about drug addiction. In contrast, social support provides a better environment where drug addicts feel higher self-esteem, lower depression, better sleep, and less anxiety. Furthermore, Zhang et al. (2019) proposed that family drug courts reduce substance abuse among caregivers. On the other hand, Bermas and Masooleh (2011) focused on the key assumption that the family can control levels of drug abuse by providing a suitable environment to the affected person. The results showed that the family played a critical role in reducing substance use. However, Yusay and Canoy (2019) noted retelling storeys of drug-addicted parents where some participants said, 'I am used to it', few believed that 'I was neglected', and some said 'I am angry and hurt'. In a nutshell, after rehab of their parents, most of them are satisfied with the given environment and believe that "their courage is our courage".

H1: *The environment has a significant impact on motivation recovery.*

2.2 Environment Impact on Relapse

Chie et al. (2015) pointed out that drug abuse has been considered a most problematic issue in Malaysia because ½ of the Malaysians have been reported to different drug consumers. However, the government of Malaysia has taken numerous preventive and precautionary measures to overcome the increasing ratio of new and relapsed drug addicts. The social environment of a former addict plays a crucial role in relapse intentions after getting treatment. Relapses have different characteristics to which they belong, such as employability status, socioeconomic background, and students. In addition, some relapses worked in highly stressful job settings; they go through severe burnout. These were usually physicians, social workers and nurses who used to intake drugs to comfortable and relaxed.

Furthermore, Lian et al. (2013) examined the contributing factors of drug relapse among drug addicts. They found two contributing factors to persuading anyone to start addiction: peer influence and curiosity. However, the quality of treatment provided in Malaysian rehabilitation centres is satisfactory, and in this study, no cases of drug relapse have been observed. Similarly, in addition to this, Ibrahim and Kumar (2009) also worked on the factors of relapse in Malaysia and suggested, contrary to previous research and believed that other factors could push the person to drug relapses, such as self-efficacy, family support, community support and employer support. On the other hand, Foo, Tam and Lee (2012) also mentioned that family factors such as family financial condition and peer influence would be the main contributors to an individual's habit of drug relapse.

In another study, Chie et al. (2016) conceived and discussed Western context studies. Chie et al. stated some significant contributing elements that influence former drug abusers to relapse. These factors comprised family relationships and the circle of friends. Families were considered the first and foremost predictor of drug relapse of these two significant elements. For example, when parents take drugs, there are likely chances that their child will relapse into a messy and demanding family or socialise in a broken family in America. Still, in Malaysia, the friendship circle is the main predictor of drug relapse intention due to consistent interaction and intimacy; former addicts may become drug-relapsed due to peer pressure (Low et al., 1996). According to a recent study, de Costa (2019) demonstrated that high and low social support and available rehabilitative centres are highly associated with drug relapse intention and recovery.

Jason et al. (2021) tried to find the answer to unique relapse factors after leaving the United States' recovery homes. The findings suggested that effects have been calculated because of the reasons: If the same recovery house did not provide the data and it is likely that due to relapse, the patients start adding again. Furthermore, Jason et al. (2021) found that the chances of relapse for any person primarily depends on the general recovery of their social and peer circle rather than personal recovery alone. The findings also suggested the importance of a social environment in which recovery is based on available resources at home (Lang & Belenko, 2000). Furthermore, Barati et al. (2021) pointed out that although substance use is a worldwide health problem, the relapse rate is higher among abstinence substance users. The results showed that substance use at any level is done due to the following factors:1(unpleasant emotion, 2(peer group and family disputes, 3(lack of follow-up from the addicted person, 4(social unacceptability, 5(because of available drugs) and 5(unhealthy environment in which a person can be persuaded to relapse.

De Costa (2019) discovered that the duration of a rehabilitation centre also predicts the intention of drug relapse. Those who spend more time in the rehabilitative centre are less likely to intake drugs again, but those who spend less time can quickly start drug relapse. Similar to the literature mentioned above, the findings of a study conducted in Iran by Samira Golestan et al. (2011) show that drug relapse is highly associated with the social environment, precisely due to friends who intake drugs. Afterwards, the easy availability of drugs is a predictor of drug relapse. This study also conceived and discussed that facing high risk and an offender's feeling of shame can also result in a relapse of drug intake.

Furthermore, Zeng and Tan (2021) concluded that no significant positive relationship was found between the family condition of drug-addicted persons and their level of relapse. Moreover, family capital contributed a lot to family functioning and relapse. Lastly, the life history of an addicted person plays a mediator role in psychological capital. Addiction can be controlled from relapse if there is family involvement and collaboration. Previously, Tucker, Vuchinich, and Gladsjo (1991) conducted a thorough study by identifying theoretical and methodological gaps in environmental influences on relapse in substance use disorders. Furthermore, Chie et al. (2015) found a range of factors, including environment and personal, that cause substance use and relapse. Similarly, Mousali et al. (2021) found that demographic, individual, interpersonal, environmental, and behavioural factors contribute to substance use relapse.

The findings of a study by Razali and Madon (2020) look at factors that influence the likelihood of relapse among former addicts. They indicate that problem-focused coping, emotion-focused coping, avoidance coping, self-efficacy, family support, and peer support play a role. In Malaysia, Fauziah Ibrahim and Naresh Kumar (2009) investigated the factors that promote relapse. The study involved 400 repeat offenders from eight rehabilitation clinics in Peninsular Malaysia. They looked at seven factors that were believed to significantly impact relapse: self-esteem, family support, peer support, community support, workplace support, and success of the recovery programme. Ibrahim et al. (2008; 2009) observed that even former drug addicts with strong family support could not avoid relapse. Mattoo et al. (2009) looked at psychosocial characteristics linked to relapse in 30 male addicts. The study examined the link between relapse, demographics, and medical and psychological factors. The findings revealed that family members with a history of drug addiction and a high risk of relapse significantly impact their ability to return to work.

Zeng, Wang, and Xie (2016) analysed drinking relapse factors from patients suffering from induced psychiatric and behavioural disorders. The findings of univariate suggested factors like occupation, deception of alcohol consumption, and qualification. In contrast, the multivariate analysis indicated that factors such as marital status, deception of alcoholic consumption, and patient's duration of psychiatric symptoms are associated with relapse and other disorders, e.g., psychiatric and behavioural. It was concluded that patients who have been deceptive about alcohol consumption tended to relapse more than the rest (Miller, 1985). Furthermore, Shafiei et al. (2014) found that most of the respondents (73.1%) have participated in substance use in the past 12 months, while a comparably lower number of respondents (73.1%) have gone through complete relapse. In the study, two main reasons for relapse have been found: unpleasant emotions and physical discomfort. It was also found that there was a significant contribution of interpersonal factors in relapse. It was suggested that as the rate of relapse increases daily, more research is needed on the reasons for relapse.

According to Macleod et al. (2005), during adolescence, people spend more time with their surroundings, particularly their friends, and less time with their families, implying that friends have a more significant influence. It is because friends are a part of the societal context that can affect behaviour and serve as a source of rationalization for aberrant behaviour. According to him, friends are discovered to impact the ex-addicts decision to relapse (Gouws et al., 2003). As a result, friends have been recognized as a critical element in ex-addicts susceptibility to relapse. According to de Waele and van Hove (2005), some respondents in their study acknowledged acting based on stereotypes imposed by society. Respondents admitted that they could not defend themselves when society hurled abuses at them. It makes it difficult for addicts to reintegrate into society because they perceive a significant difference between themselves and the members of society. Most of the respondents in this study claimed to have a strong desire to start a new life, and those who relocated from their hometowns to new locations are among them. On the other hand, isolation and social stigma make it difficult to integrate into a new context.

Haghighi et al. (2018) claimed that relapse makes treatment more difficult, and 80% of addicted people relapse after treatment. Therefore, the study found that family insistence (25.5% of cases) was the main reason for relapse, while social conditions (22.9%) were the other most common factor in quitting addiction. It was concluded that it is not a good strategy to remove an addicted person from rehabilitation centres after treatment. Thus, planning and follow-up after treatment would be necessary to reduce relapse. On the other hand, Nunes et al. (2018) stated that if the span of treatment is short, there are more chances of relapse among patients with opioid use disorder. Furthermore, Back et al. (2010) found that many respondents (72.3%) relapsed to adding cocaine after treatment or follow-up duration. Moreover, Abdollahi et al. (2014) suggested that all the respondents (200) have relapsed once in their lives after being convicted of drugs, while there was a significant relationship between relapse and self-efficacy of the patient.

H2: *The environment has a significant impact on relapse.*

2.3 Framework

The proposed research model of this study will have an impact on the environment, motivation, recovery, and relapse. The causal relationships between the constructs are shown in Figure 1.
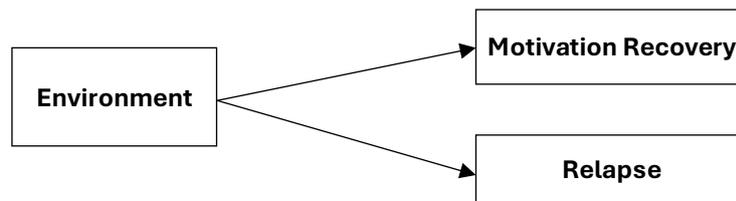
Figure 1: Proposed Research Model

2.4 Research Hypotheses

H1: *The environment has a significant impact on motivation recovery.*

H2: *The environment has a significant impact on relapse.*

3. Research Methodology

This study is quantitative, and a cross-sectional technique was executed to examine the study variables proposed. Moreover, the present study was conducted online using the Qualtrics platform during the middle of April and the first week of May 2020. Additionally, a survey was conducted, and a self-administered questionnaire was used to measure the variables (environment, motivation recovery, and relapse) of this study. Furthermore, data were collected from 50 respondents by randomly distributing questionnaires among them. Finally, the results of the study were obtained using IBM SPSS (Version 25.0) and partial least squares structural equation modelling (PLS-SEM) supported by Smart-PLS 3.3 to analyse the research model of the study.

3.1 Measurements

In terms of using proper measurement tools to ensure the reliability and validity of the results, the present study adopted a measuring instrument from Zimet, Dahlem, Zimet, & Farley (1988), to evaluate the construct 'Environment', which is based on the 2 dimensions of a social and family environment. On the other hand, Relapse was measured through the instrument contracted by Cady et al. (1996), consisting of 25 items. Lastly, the instrument of motivation recovery is adopted from Kelly and Green (2014), which consists of 5 items. In general, the items used in the surveys were measured on a five-(5) point Likert scale ranging from 1 = Strongly disagree to 5 = Strongly agree.

3.2 Data Analysis

The given data were analysed through PLS-SEM, which is chosen over CB-SEM (covariance-based SEM) due to the philosophy of measurement and the aim of the analysis (i.e., to predict rather than to confirm), as suggested by Huit et al. (2018). Furthermore, one of the reasons for using the PLS-SEM approach was to execute and evaluate the measurement and structural models.

4. Results

The present study examined the measurement model based on internal consistency, reliability, convergent validity, and discriminant validity. The reliability of the constructs was inspected using Cronbach's alpha and composite reliability. In addition, Table 1 shows the readings of Cronbach's alpha for the constructed environment (0.920), motivation recovery (0.900), and relapse (0.983), respectively. Meanwhile, the composite reliability for the environment (0.938), motivation recovery (0.926), and relapse (0.985) are also shown in Table 1. All the construct values exceeded 0.70 (Hair et al., 2014), indicating strong reliability among the measures.
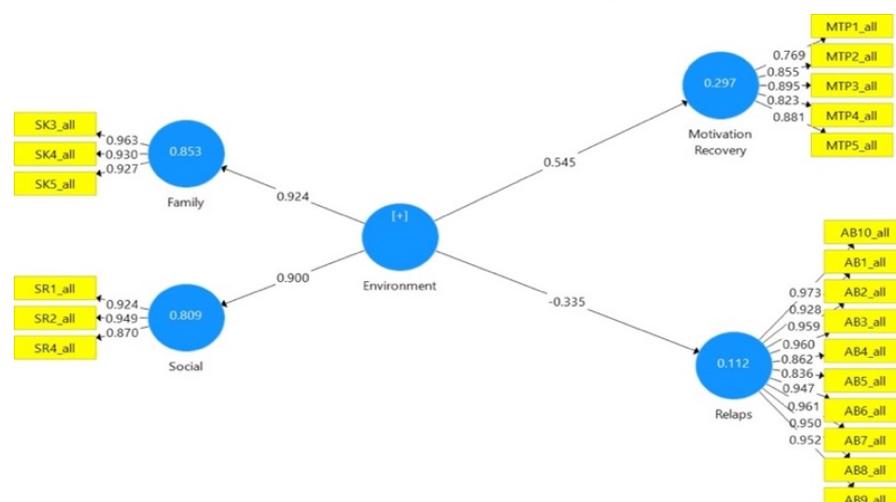

Figure 2: Measurement Model

To ensure the reliability and validity of the results, convergence validity was checked by mean-variance extracted (AVE). Furthermore, the convergent validity of the current study was achieved, as shown in Table 1, while the AVE values exceeded 0.50 (Hair et al., 2014; Hassan et al., 2022). In conclusion, all elements of the present study achieved the requirement of convergence validity.

Table 1: Reliability and Validity Analysis

Factors	Items	Item Loadings	Cronbach Alpha	Composite Reliability(CR)	Average Variance Extracted (AVE)
MotivationRecovery			0.900	0.985	0.872
	MTP1_all	0.769			
	MTP1_all	0.855			
	MTP1_all	0.895			
	MTP1_all	0.823			
	MTP1_all	0.881			
Relapse			0.983	0.985	0.872
	AB1_all	0.928			
	AB2_all	0.959			
	AB3_all	0.960			
	AB4_all	0.862			
	AB5_all	0.836			
	AB6_all	0.947			
	AB7_all	0.961			
	AB8_all	0.950			
	AB9_all	0.952			
	AB10_all	0.973			
Environment			0.920	0.938	0.715
Family	SK1_all	Removed			
	SK2_all	Removed			
	SK3_all	0.963			
	SK4_all	0.930			
	SK5_all	0.927			
Social	SR1_all	0.924			
	SR2_all	0.949			
	SR3_all	Removed			
	SR4_all	0.870			
	SR5_all	Removed			

Source: Calculated by the authors

Discriminant validity is the degree to which a construct is different from any other construct, which can be assessed by two means. The first means is to check the level of correlation between the constructs in focus, while the second means is to monitor the degree of items of a construct and distinguish it from any other construct (Hair et al., 2018). Furthermore, discriminant validity can be measured using the Fornell-Larcker criterion, that is, by comparing the correlation values between the constructs and the square root of the AVE values for each construct (Henseler, 2017). Table 2 demonstrates that all square roots of AVEs (bold) have values that are larger than their correlations with the corresponding constructs. This implies that the variance of each construct is greater than the measurement error variance (Hair et al., 2016). In addition, all constructs provided evidence of satisfactory discriminant validity.

Table 2: Discriminant validity

	Environment	Motivation Recovery	Relapse
Environment	**0.846**		
Motivation Recovery	0.545	**0.940**	
Relapse	-0.335	-0.730	**0.934**

Source: Calculated by the authors

4.1 Structural Model

The structural model's significance in the significance of path coefficients was evaluated via the 95% bias-corrected and accelerated bootstrap confidence intervals with 5000 re-samples (Hassan et al., 2021). The bootstrapping procedure shows that the direct effect of feeling and attitude on motivation is significant for the relationship between constructs (see Table 3). The standardised beta coefficients reveal that the recovery of motivation and environment significantly influences (beta = 0.545, t value = 5.299, p = 0.00) and environment

significantly influences relapse (beta = -0.335, t value = 2.659, p = 0.000). Therefore, Hypotheses H1 and H2 are supported.

The R^2 of the endogenous variable was 0.297, which indicates that the environment explains 29.7% of the variance in motivation recovery. Meanwhile, relapse was 0.112, signifying that the environment explains 11.2% of the variance in relapse. The effect size between environment and motivation recovery is a large effect of 0.423, and a small effect between environment and relapse (0.127). The values of f^2 are categorised into three, which are small (0.02), medium (0.15), and large (0.35) (Hair et al., 2016).

Table 3: Bootstrapping Result

	Standard Beta Coefficient	T –Value	P-Value	R^2	Q^2	f^2
H1: Environment → Motivation Recovery	0.545	5.299	0.00	0.297	0.186	0.423
H2: Environment → Relapse	-0.335	2.659	0.00	0.112	0.089	0.127

Source: Calculated by the authors

Based on the blindfolding procedure with an omission distance of 7, a predictive relevance in the structural model is well secured as a cross-validated redundancy result (the Stone-Geisser test, Q^2) of the endogenous variable was more significant than 0 ($Q^2 = 0.186$ for motivation recovery) and ($Q^2 = 0.089$ for relapse) (Chin, 1998). Further, its overall model fit using the standardized root mean square residual (SRMR = 0.056 as an index for model validation was beneath 0.08 and thus considered satisfactory (Hu & Bentler, 1999).

5. Discussion

Drug addiction can be referred to as a psychological disability in which a person misuses a substance. As a result, one may lack self-esteem for recovery, influenced by many social, environmental, and psychological factors. The objective of this study was to first find out the impact of the environment on motivation recovery. Second, to find out the impact of the environment on relapse. These results were consistent with the results of Bassuk et al. (2016), in which the acquired responses indicated a positive social circle intervention in motivation for recovery and relapse.

There are similarities between Sari, Fatah and Nurmala (2021) research work and the present study that described the family's role in dealing with drug addiction patients and stimulating their motivation level for a swift recovery. At the same time, there are many possible explanations for this result. For example, Ibrahim and Kumar (2009) suggested that potential factors affecting drug relapses in Malaysia, such as self-efficacy, family support, community support, and employer support, tend to influence relapse among addicts. Furthermore, the findings in the present investigation are consistent with the findings of Hong et al. (2021), who emphasised that the drug rehabilitation process can be sped up by stimulating the patient's motivation with the help of family guidance. In addition, the study also suggested that Western countries prefer external environmental factors, for instance, family function, family relationships, and family support. China, in contrast, considers the role of family members and their domestic responsibilities that create a friendly environment to provide better services to the substance user (Patrick, & Williams, 2012).

Additionally, another study discovered that interactions, listening, sharing, social relationships, environmental settings, and counseling increase motivation for recovery (Paterno et al., 2018). According to studies, various factors have been implicated in the beginning, persistence, and relapse of addiction after treatment. Fallahzadeh & Hosseini (2006) found that various circumstances, such as addicted peers, family ignorance, and returning to prior settings, can help people relapse. A study by Deepti et al. (2014) discovered that friends played a crucial role in substance use relapse. Individual, family, occupational, and economic factors, according to Afkar et al. (2017), are the most critical determinants of substance use relapse. Relapse can also occur when people rekindle their relationships with drug-using friends or dealers. Individuals cannot resist the need or suggestion to reuse drugs, resulting in tension or dissatisfaction (Mousali et al., 2021). According to Amat et al. (2020), relapse in former addicts is also caused by friends (58.36 per cent), 23.21 percent 'recommendation', and 18.43 per cent by dissatisfaction or stress causes. Individuals exposed to a dangerous setting (the social environment for drug users) are more likely to be influenced to retake drugs. Drug abusers, or even past drug abusers, are still stigmatised in today's society. Stigma is how society views something or someone, such as drug addicts (Ferrygrin, 2016).

These results are in good agreement with other studies, e.g. Villegas (2022), which have shown that the greatest contributing factor to drug relapse is the environment, among others, which could be lack of participation after rehabilitation is complete, promotion of the working relationship with the patient's family members, community and peer group and, last, active participation in activities that strengthen the soul and motivate the person from within. In addition, Zironi et al. (2006) concluded the same results and suggested that the environment can trigger the stimulus to drug relapse.

According to a study conducted by Ashrafi Hafez et al. (2014), a pleasant home environment and good emotional interaction in the family setting are essential variables for preventing drug relapse. Individuals' value

of peers rises when family disputes arise, and social pressures from peers can enhance the likelihood of reusing drugs. Social support is a family and social element that can help people overcome sociopsychological problems and damages, such as drug addiction. It makes it much more difficult for addicts to obtain help and care. It isolates drug addicts, making them treated the same by the community even after they have stopped using. Many drug addicts who have recovered and reintegrated into society feel inferior and uneasy due to the various negative stigmas directed at them, even by their relatives (Ferrygrin, 2016).

On the contrary, Chan et al. (2019) showed that external factors such as family do not influence a former addict's attitude towards recovery. The family can increase the desire to consume substances again. This study has indicated that other factors are significant in increasing recovery motivation. These were intimate partners, employability, clarification of life objectives, and religiosity. All these relationships and factors consume their spare time, leading to strong social bonds that can reduce the chances of relapse. However, Golestan et al. (2011), described a positive association between environmental determinants and drug relapse among former addicts. This study has also indicated the relationship between drug availability and the intention to relapse with drugs of substance abusers. Furthermore, this study found a reciprocal relationship between the acceptance by the family of drug addicts after rehabilitation and their tendency to return to the intake of drugs due to social stigmatisation. Lastly, as individuals spend more time with their friends and less time with their family and other people, the results have suggested that there must be peer support for drug addicts to restart their everyday life.

To our knowledge, only one other study Knapp et al. (2021) has come up with the idea that social influence can change the will and wishes of drug addicts after leaving the rehabilitation centre, and there are many chances of drug relapse at such social influences. At the same time, Kabisa et al. (2021) found similar findings that endorsed a higher tendency to relapse among those convicted of substance use disorder. Furthermore, it was also found that it is likely that those who live with peers are more likely to relapse compared to people who live in a family environment. Additionally, there is a chance of relapse among those who have a tense family environment.

Therefore, to increase the motivation of addicts, ex-addicts, drug addiction counsellors, social workers, families, and the whole community must work together to restore morale and restore the motivation of ex-addicts to build a new and more meaningful life. Former addicts must be trained to have a strong determination and strong inner resilience to stay away from drugs. This high spirit and motivation will determine their hold and will make them not easily shaken in the face of life to come after returning to the fold of society. Drug addiction counsellors are advised to further strengthen and emphasise the principle of self-help for former addicts in drug rehabilitation modules to build a strong fighting spirit and want progress in life while seeking recovery treatment. Meanwhile, family, employers, and the surrounding community should be ready to work together to take over the role of the drug addict and counsellor after the former addict is released. According to Parker et al. (2021) and Stevens and Smith (2005), an addict seeking treatment in a rehabilitation centre usually has high motivation and confidence to recover that they will succeed in avoiding being trapped again by addiction with the influence of the environment. They had a strong spirit to recover upon release (Cahill et al., 2003). However, after finishing the treatment and being released, their condition changed. They found that the environmental conditions outside the rehabilitation centre were not as supportive as they had hoped. Therefore, society should be more sincere in helping and guiding ex-addicts by giving undivided support and encouragement to ex-addicts to be more confident to move on with life. The cooperation of all parties in dealing with this problem can help ex-addicts build a more skilled and confident life to continue living a healthy, drug-free life.

In the current study, the results show that family support motivates the individual to leave the drugs. However, on the other hand, the social setup negatively impacts the individual's life and does not support it. Similarly, Parker et al. (2021) pointed out that the negative emotion factor is more significant to the relapse than peer pressure, self-efficacy, and lack of personal assertiveness. Here, it is also mentioned that any parental conflict or disorder and the parent-child relationship did not show links with relapse. Bashirian et al. (2021), on the other hand, found that social context, social support, and self-efficacy are the main components of substance abuse relapse among women.

6. Conclusions

A former addict who intends to restart drug abuse after receiving treatment from a rehabilitation centre is called a drug relapse. The literature has indicated that drug relapse is the result of several environmental factors, specifically family relationships, community support, friends support, and a person's attractiveness toward drugs. In contrast, recovery motivation has also been considered a result of environmental factors that motivate former offenders to normalise their behaviour according to societal norms. The objective of the present research was to find out whether the hypothesised environment has a great impact on motivation recovery and relapse. The results indicated a significant impact of the environment on motivation recovery and relapse based on the data provided by 50 Malaysian drug addicts. Therefore, the hypothesis proposed for the current study shows the correlation between the desired variables. It is proposed that more studies could be conducted employing more variables and respondents. In addition, future research will be conducted by adopting quantitative techniques to broaden the scope of the study.

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