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RESEARCH PAPER

Relapse Tendency among Individuals with Substance Use: Role of Family Functioning and Drug Abstinence Self-Efficacy

[1]Adeeba Saleem* and [2] Sobia Masood

1. MPhil Scholar, National Institute of Psychology, Centre of Excellence, Quaid-i-Azam University, Islamabad, Islamabad
2. Professor, Department of Psychology, Rawalpindi Women University (RWU), Rawalpindi, Punjab, Pakistan

***Corresponding Author:** adeebasaleem735@gmail.com

ABSTRACT

The study aimed to investigate the predictive role of family functioning on relapse tendency while also exploring the mediating role of drug abstinence self-efficacy between study variables. The research utilized the cognitive social learning theory and relapse prevention model to explore these influences. The research used a correlational research design; and the data were obtained from 300 men with substance use from drug-rehabilitation centres in Rawalpindi and Islamabad, Pakistan. Findings showed that poor family functioning and low drug abstinence self-efficacy significantly increased relapse tendencies among individuals with substance use disorder. Findings further revealed that drug abstinence self-efficacy mediates the relationship between poor family functioning and relapse tendency. Based on the present findings, it is recommended to integrate family-based therapy and self-efficacy training into substance use treatment programs to effectively reduce relapse rates.

KEYWORDS Family Dynamic, Relapse Tendency, Self- Efficacy

Introduction

Addiction represents a pervasive global issue (UNODC, 2017) that is often accompanied by a myriad of psychological and emotional challenges (EI-Bassel et al., 2014; Kelly & Daley, 2013; Klevens et al., 2012; Moss & Munt, 2003). It is closely linked to the phenomenon of relapse, which refers to the recurrence of addiction after undergoing treatment. As defined by DSM-5 (First et al., 2022), addiction, or substance use disorders, is associated with alterations in brain circuits controlling reward processes, leading to intense drug cravings and recurrent relapses. These relapses are driven by biological changes, including genetic factors; neural adaptations (Goldstein & Volkow, 2011; Heatherton & Wagner, 2011; MacNicol, 2017), and elevated levels of the stress hormone, adrenocorticotrophic hormone (Sinha et al., 2006; Sinha et al., 2011). Additionally, psychosocial factors, both interpersonal (such as family environment, parental warmth, peer influence, and societal factors) (Masood & Sahar, 2014) and intrapersonal (including personality traits, self-regulation, and coping skills) play an important part in the development and persistence of dependence (Melemis, 2015).

Relapse refers to the resumption of alcohol or other drug use following a period of abstinence and is frequently accompanied by the reappearance of dependence symptoms. The speed at which these signs of dependence re-emerge is considered a significant indicator of the level of drug dependence. Relapse denotes a regression in an individual's efforts to alter substance use patterns, reverting to previous levels of drinking or resuming substance use following a period of abstinence or setbacks in behavior modification endeavors (Rahman et al., 2016). Research indicates that factors such as young age at initiation, gender, unemployment, single marital status, peer influence, family history of substance use, interpersonal conflict, inadequate family support, and environmental elements like drug availability and accessibility contribute to the propensity for relapse

(Kabisa & Biracyaza, 2021). Preventing relapse is particularly challenging because it requires an individual to face the full spectrum of biological and psychosocial factors related to the relapse condition. Relapse prevention is crucial in an addict's recovery journey because the risk of relapse can remain for many years after treatment (Marlatt & Donovan, 2005; NIDA, 2020). The key to preventing drug relapse lies in identifying the warning signs or risks of relapse, as early detection and intervention can play a significant role in preventing a relapse episode (Gorski, 1990).

Substance use disorders (SUDs) are chronic and relapsing conditions characterized by the compulsive use of substances despite negative consequences. Despite efforts to achieve and maintain sobriety, individuals with SUDs often face relapse, which refers to the return to substance use after a period of abstinence. Considering the factors contributing to relapse is crucial for emerging effective prevention and intervention strategies. Relapse tendency is a significant concern in the rehabilitation of individuals with substance use. Despite successful completion of a rehabilitation program, many individuals face the risk of relapse, which refers to the return to substance use and subsequently a period of abstinence. Several factors contribute to relapse tendency in this population. Psychological factors such as cravings, stress, and negative emotions can trigger the desire to use substances again. Environmental factors, including exposure to drug-related cues or social networks that encourage substance use, can also increase the likelihood of relapse.

Stress and negative life events are additional social factors that contribute to relapse. Individuals with SUDs often face a range of stressful situations, such as financial difficulties, relationship problems, or legal issues. These stressors can trigger the desire to cope through substance use, increasing the risk of relapse. Research has shown that higher levels of stress and exposure to negative life events are related to an increased risk of relapse (Bhattacharyya et al., 2023).

Family functioning refers to how family members interrelate with one another and adapt to changes and stressors as a unit. It encompasses various components, including communication, emotional expressiveness, problem-solving, roles and responsibilities, and overall family satisfaction (Walsh, 2016). Family functioning refers to the overall dynamics, interactions, and processes within a family system. It encompasses various aspects, such as communication patterns, problem-solving abilities, roles and responsibilities, emotional support, and the level of cohesion and adaptability within the family unit. Healthy family functioning is characterized by effective communication, mutual respect, emotional connectedness, and the ability to handle stress and challenges together (Gouveia et al., 2024).

Poor family functioning, including decreasing levels of family interconnection and high levels of family conflicts, predicted a higher risk of substance use relapse among individuals in recovery from addiction (Kelley et al., 2019). Family conflict and criticism were associated with an enlarged risk of relapse in individuals with alcohol use disorder (O'Farrell et al., 2003). In individuals undergoing substance use treatment, there was a correlation between poor family functioning, negative emotions, and interpersonal difficulties, all of which were linked to an increased risk of relapse (Gifford et al., 2013).

Healthy family functioning, characterized by open and effective communication, emotional support, and positive relationships, has been linked to lower relapse rates. A supportive family environment that fosters understanding, empathy, and problem-solving skills can serve as a protective factor against relapse (Jones et al., 2018). Strong family bonds and involvement in the recovery process can provide individuals with a sense of belonging, motivation, and accountability, reducing the risk of relapse (Miller & Harris, 2000).

One potential variable that may intermediate the relationship between relapse tendency and family functioning is coping strategies. Research suggests that the way individuals cope with stress and challenges can influence their risk of relapse and how family functioning impacts this risk (Johnson et al.,, 2001). Utilizing effective coping mechanisms, such as problem-solving, regulating emotions, and seeking social support, could mitigate the influence of dysfunctional family dynamics on the tendency for relapse. Conversely, maladaptive coping strategies, such as avoidance or substance use, may exacerbate the link between family dysfunction and relapse (Thompson et al., 2021).

Several psychological factor associated with relapse is cognitive impairment. Prolonged substance use can lead to cognitive deficits, including impaired decision-making, attention, and memory processes. These cognitive impairments can make individuals more vulnerable to relapse by impairing their ability to resist urges, evaluate consequences, and plan for the future. A study found that cognitive impairment was a remarkable predictor of relapse among individuals with cocaine use disorders (Moe et al., 2023). Biological factors, including genetic predisposition and neurobiological mechanisms, also influence the relapse tendency in individuals with SUDs. Twin and family studies have consistently demonstrated a heritable component in SUDs, indicating a genetic vulnerability. Genetic factors can influence various aspects of substance use, including the initial response to substances, reward processing, and stress response, thereby contributing to relapse susceptibility (Volkow et al., 2020).

Another intervening factor to consider is self-efficacy, which pertains to an individual's confidence in their capability to resist relapse and sustain recovery. Elevated levels of self-efficacy have been linked to a decreased likelihood of relapse and the capacity to effectively manage complex family dynamics (Ashford et al,, 2019). Self-efficacy may mediate the relationship between family functioning and relapse by influencing an individual's confidence in their ability to cope with family-related stressors and triggers (Zeng & Tan, 2021).

Additionally, social support, equally inside and outside the family, could serve as a mediating variable. Positive social support has been shown to enhance recovery outcomes and reduce the risk of relapse (Smith, 2021). Strong social support networks, including supportive family members, friends, or support groups, can provide individuals with emotional support, encouragement, and practical assistance, which may mitigate the impact of family dysfunction on relapse tendencies (Lawal, 2024).

Research has shown that substance use is most prevalent among young adults, with rates of use decreasing with age according to the SAMSHA 2019 report (Kusiak, E., & Johnson, 2024). The use of certain substances, such as marijuana and tobacco, is also more common among adolescents and young adults (Kelley et al., 2019).

The investigation delves into the median age at which participants first initiated smoking, which was 17 years old, a pivotal period marking the transition from adolescence to adulthood. During this phase of rapid physical and cognitive development, adolescents experience a heightened sense of moving into adulthood. They exhibit a keen interest in exploring unfamiliar facets of the world around them, often driven by curiosity and a desire for novelty. Engaging in exploration and experimentation can contribute to their overall sense of well-being. Young individuals are particularly susceptible to the allure of drugs, often influenced by the allure of forbidden experiences. This curiosity, coupled with a relatively weak ability to resist external temptations, increases their susceptibility to substance use. Research indicates that negative interactions with peers play a significant role in predicting individual drug consumption behaviours (Zeng & Tan, 2021).

In Pakistan, substance use is also a problem, with drug use reported as a major public health concern. According to a national survey conducted in 2013, the prevalence of

drug use in Pakistan was reported to be 6.7% among the general population aged 15-64 years. Furthermore, it was noted that there has been a shift in drug use patterns from traditional substances such as opium to synthetic drugs such as amphetamine-type stimulants (ATS). Based on a UNODC report, approximately 6.45 million individuals aged 15 to 64 in Pakistan engaged in the non-medical use of plant-based, synthetic, or prescription drugs. Annually, Pakistan witnesses the addition of nearly 50,000 drug addicts, marking a substantial rise from 50,000 in 1980 to 8.1 million in 2011. The issue of drug addiction extends beyond Pakistan, affecting neighbouring countries such as Bangladesh, India, Afghanistan, and Nepal.

The World Data Statistics demonstrated that approximately 318,000 deaths in year 2016 were resulted from addiction or as per DSM-V substance use disorder and the number of these casualties is increasing with each proceeding year (Ritchie & Roser, 2018). Drug addiction is accompanied by a set of warning signs that serve as indicators for predicting a relapse. Relapse prevention thus involves the identification of these warning signs to effectively address them, thereby reducing the likelihood of relapse (Brandon et al., 2007; Witkiewitz et al., 2005).

Family functioning is well-defined as overall family environment in term of family adaptableness (flexibility to change) and excellence of family interaction. Family function is describe through its domain that are healthy/competence, leadership, conflict, expressiveness and cohesion. Family with good functioning have more cohesion, healthy pattern, expressiveness and leadership and less conflict and vise versa. In present study, family functioning measure through a scale, high score indicates poor family functioning.

Family functioning had a direct impact on self-efficacy and an indirect effect on relapse tendency through self-efficacy among individuals in substance abuse treatment. The study suggests that positive family functioning can improve self-efficacy, which can, in turn, reduce the likelihood of relapse (Lee et al., 2014).

Family-based intervention for adolescents with substance use disorders improved their self-efficacy and reduced the likelihood of relapse (Kaminer, 2008). Family functioning plays a crucial role in understanding and predicting relapse tendencies among individuals. Research suggests that the quality of family interactions, communication patterns, and support within the family unit significantly influence the likelihood of relapse in various contexts, including substance abuse, mental health disorders, and chronic illnesses (Smith et al., 2019; Johnson & Anderson, 2020).

Family functioning significantly influences an individual's self-efficacy toward substance use. Positive family functioning and support are associated with higher levels of self-efficacy, while negative family functioning and dysfunction are linked to lower self-efficacy. The studies conducted by Lee et al., (2014), provide evidence for the character of family functioning in influential self-efficacy toward substance use. One study investigated the relationship between family functioning, and self-efficacy toward substance use among adolescents. The findings revealed that positive family functioning, characterized by supportive and cohesive relationships, was positively correlated with higher levels of self-efficacy in resisting substance use. Conversely, negative family functioning, marked by conflict, poor communication, and substance use within the family, was associated with lower self-efficacy toward substance use (Paredes., 2024).

Meta-analysis evidence indicates that family dysfunction, such as poor communication, low parental involvement, and parental conflict, is consistently linked to adolescent substance use and relapse (Beyene et al., 2018). Adult attachment is another factor that might moderate the relationship between relapse tendency and family functioning. Timko et al. (2013) investigated this influence and found that adult attachment can act as a moderator, impacting how family functioning affects relapse tendency.

Individuals with secure attachment styles tend to be more resilient and capable of managing dysfunctional family dynamics, which may lower their risk of relapse. Conversely, those with insecure attachment styles, such as anxious or avoidant attachment, may be more vulnerable to the negative effects of family dysfunction on relapse.

Lee et al., (2014) investigated the mediating role of family support in the association between family functioning and drug abstinence self-efficacy among adolescents facing substance use issues. Their findings indicated that family support served as a partial mediator in the link between positive family functioning and increased self-efficacy regarding substance use. This implies that nurturing family environments aid in the cultivation of self-efficacy by promoting feelings of belonging, trust, and encouragement.

Abstinence self-efficacy refers to an individual's confidence in their ability to refrain from engaging in a specific undesired behavior, particularly in situations where there is a strong inclination to participate in that behavior (Lee & Oei, 1993; Young, Oei, & Crook, 1991). Self-efficacy plays a significant role in abstaining from various habitual behaviors, such as smoking, illicit substance use, and excessive drinking. Studies have demonstrated that individuals who attempt to quit smoking and possess higher self-efficacy scores tend to achieve better outcomes.

Self-efficacy refers to individuals' beliefs regarding their capacity to achieve specific levels of performance and exert influence over events impacting their lives. Higher levels of self-efficacy are associated with a reduced likelihood of relapse among individuals with drug addiction (Zeng & Tan, 2021). Abstinence self-efficacy is the belief an individual has that he or she will be able to abstain from participating in an undesired action; especially in situations where one has a high tendency to partake in a given activity (Lee & Oei, 1993; Young, Oei, & Crook, 1991). Self-efficacy is involved in abstaining from numerous habitual behaviours, including smoking, using illicit substances, and excessive drinking. Researchers showed that among individuals who attempt to quit smoking, those individuals with higher self-efficacy scores have better outcomes.

Drug Abstinence Self-efficacy plays a pivotal role in the retrieval process of individuals with addiction. Higher stages of self-efficacy are related to a decreased likelihood of relapse, while lower self-efficacy increases the vulnerability to relapse. The findings from research studies conducted by Marlatt et al, (1988) Donovan et al., (2008) provide evidence for the significant impact of self-efficacy on relapse tendency in substance abuse treatment.

Self-efficacy serves as a cognitive mechanism that influences individuals' thoughts, emotions, and behaviours. According to Bandura's social cognitive theory, individuals with high levels of self-efficacy are more likely to persevere, exert effort, and maintain motivation in the face of challenges. Conversely, individuals with low self-efficacy may be more prone to feelings of helplessness, giving up easily, and experiencing self-doubt (Benight & Bandura, 2004). People with high self-efficacy have a greater tendency to discontinue substance abuse and also are less insistent on drug abuse in the face of the risk of substance abuse. Moreover, self-efficacy can only predict drug abuse for three months after treatment (Ader et al., 2024).

In a study conducted by Marlatt et al., (1988), the association between self-efficacy and relapse among individuals undergoing alcohol treatment was examined. The findings indicated that individuals with greater self-efficacy demonstrated a reduced likelihood of relapse, while those with lower self-efficacy were at a higher risk of relapse. This research underscores the significance of self-efficacy in sustaining abstinence and preventing relapse. A separate investigation conducted by Donovan et al., (2008) examined the influence of self-efficacy on relapse prediction among individuals diagnosed with cocaine dependence. The

results indicated that individuals with stronger self-efficacy beliefs exhibited a decreased likelihood of relapse, even when experiencing intense cravings. This study underscores the protective role of self-efficacy in preventing relapse, particularly during difficult circumstances.

A review of Pakistani research has explored the demographic profiles of drug addicts to investigate the socio-demographic characteristics linked to addiction and relapse. Previous studies by Ghazal (2019), Aslam (2015), Jabeen et al. (2017), and Masood & Sahar (2014) have contributed to this understanding. However, there is currently no evidence in Pakistani literature addressing the psychological factors influencing relapse prevention among drug addicts. Therefore, this study aims to fill this gap by examining the relationship between family functioning, relapse tendency, drug abstinence self-efficacy, and drug outcome expectancies as psychological factors in preventing relapse among drug addicts in Pakistan. It is anticipated that these factors will reduce the likelihood of relapse, and the findings can be used to develop an intervention plan for relapse prevention.

Theoretical Framework

Cognitive Social Learning Theory

Bandura (1977; 1986) developed the cognitive social learning theory, highlighting the importance of an individual's thoughts and social environment in shaping coping behaviours. This theory suggests that coping responses to life events are learned behaviors influenced by personal beliefs and societal influences.

In the context of substance use disorders, applying this theory suggests that an individual's belief in their ability to cope, known as perceived self-efficacy, plays a crucial role. For instance, if someone has low perceived self-efficacy after using alcohol, it might increase the likelihood of relapse. This concept has been discussed by researchers such as Rollnick & Heather (1982) and Wilson (1978).

Family System Theory

Family systems theory shifts the focus from the parent-child relationship to view the family as a social unit (Parke et al., 2006). As a social entity, a family has unique characteristics, rules, roles, communication patterns, and power structures that go beyond its members (Smith et al., 2017). In today's society, the family remains the primary source of attachment, nurturing, and socialization for individuals. It is therefore important to understand the impact of substance use disorders (SUDs) on both the family unit and its members. Substance use can affect each family uniquely, leading to various issues such as unmet developmental needs, weakened attachment bonds, financial difficulties, legal problems, emotional distress, and sometimes violence within the family. Moreover, children in such environments are at a higher risk of developing SUDs themselves (Zimic & Jakic, 2012).

Focusing solely on the individual with addiction often proves to be less effective. The social work profession, in particular, has long recognized the importance of an individual's family environment. Social work education and training emphasize the significant mutual influence between individuals and their surroundings. This topic aims to demonstrate the benefits of involving the family in treating SUDs, which can improve outcomes for both the family and the individual.

Evidence-based family interventions have been shown to be more effective than treatments that target only individuals or groups. Ignoring the family when treating an individual may reduce the effectiveness of treatment for two main reasons: it overlooks the significant impact of SUDs on the family, leaving family members without support, and it

fails to utilize the family's potential as a support system for facilitating change (Monari et al., 2024).

Relapse Prevention (RP) Model

The Relapse Prevention (RP) model based on the cognitive-behavioural model, as proposed by Marlatt and Gordon, posits that relapse can be influenced by both immediate determinants (such as high-risk situations, coping skills, outcome expectancies, and the abstinence violation effect) and covert antecedents (like lifestyle factors, urges, and cravings). The Relapse Prevention (RP) model further integrates various specific and comprehensive intervention strategies, enabling therapists and clients to address each stage of the relapse process effectively (Wardle et al., 2024).

Redel et al., (2024) found that the Relapse Prevention (RP) approach is effective in both the initiation and maintenance of behaviour change in individuals with substance use disorders. The study highlighted that RP strategies, categorized into specific intervention techniques and global self-control approaches, are crucial in managing high-risk situations and promoting positive lifestyle adjustments.

Specific interventions, such as enhancing self-efficacy through achievable goals and correcting misconceptions about substance use, were shown to significantly reduce relapse risk. The importance of a thorough assessment of clients' substance use patterns, high-risk situations, coping abilities, self-efficacy, outcome expectations, and readiness for change was also emphasized, along with addressing complicating factors like comorbid disorders. This comprehensive assessment enables clients to identify high-risk situations and apply cognitive and behavioural strategies to avoid or mitigate relapse triggers effectively.

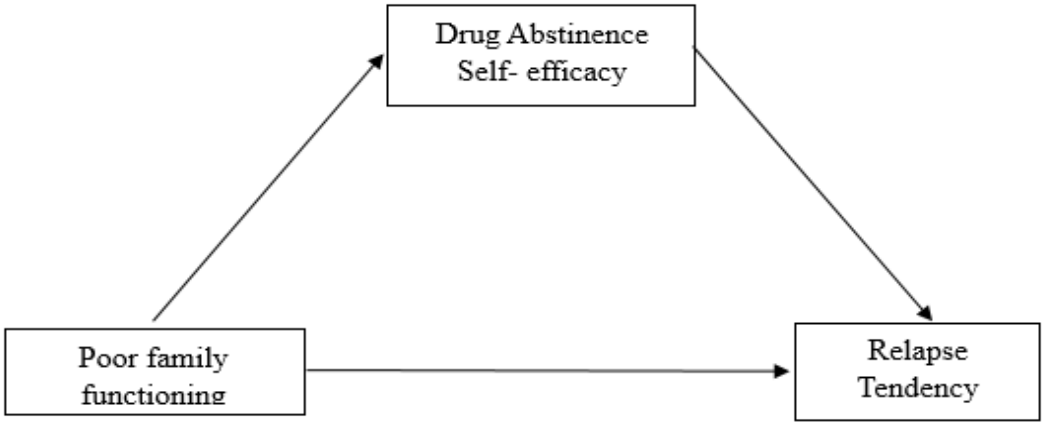

Figure 1 Conceptual Model

The conceptual model explains that family functioning influences an individual's relapse tendency. Positive family functioning, characterised by healthy communication, support, and effective problem-solving, may reduce the risk of relapse by providing a supportive environment and addressing underlying issues that contribute to substance use (Sutlu & Kutlu, 2024). Additionally, the model proposes that drug abstinence self-efficacy plays a key role in shaping an individual's relapse tendency. Higher levels of drug abstinence self-efficacy, where individuals have self-assurance in their ability to resist drug use and manage triggers, are associated with a lower likelihood of relapse (Binumon et al., 2024).

The conceptual model suggests that family functioning, and drug abstinence self-efficacy are interconnected factors that influence an individual's likelihood of relapse. Understanding these relationships can help in developing interventions and strategies to

enhance family support, strengthen self-efficacy, and address outcome expectancies, ultimately reducing the hazard of relapse in individuals with substance use issues (Jia et al., 2024).

Hypotheses

1. Poor family functioning will positively predict relapse tendency among individuals with substance use.

2. Poor family functioning will negatively predict drug abstinence self-efficacy.

3. Drug abstinence self-efficacy will negatively predict relapse tendency among individuals with substance use.

4. Drug abstinence self-efficacy will mediate the relationship between family functioning and relapse tendency.

Material and Methods

The research was quantitative and a correlation study. Data was obtained from rehabilitation centers.

Sample

The sample consisted of 300 substance used individuals. The age range of the participant was 18 – 50 years (M=30.30, SD=7.94). The sample was taken from drug rehabilitation centers of Islamabad and Rawalpindi. Purposive sampling technique was used to access the targeted papulation. Individuals from both nuclear and joint family system were taken. The study included individuals who have been officially diagnosed with substance use disorder (SUD) by rehabilitation centers. Only adult substance users participated in the study and individuals who have been diagnosed with some psychological disorders or any other physical illnesses were excluded.

Table 1
Demographic Characteristic of Sample (N= 300)

Variables	*Categories*	*N*	*%*
Education	Below matriculation	107	35
	Matric and above	129	43
	Master and above	64	21
Family system	Nuclear	106	36
	Joint	194	64
Marital status	Married	116	38
	Unmarried	184	62
Employment status	Employed	126	42
	Unemployed	174	58
Type of Drug	Poly drug users	139	46
	Crystal methamphetamine	81	27
	Cannabis	67	22
	Heroin	13	5

Note. n = frequency; % = Percentage*; M* = Mean*; SD* = Standard Deviation*.*

Table 1 shows that majority of the participants were matric and above, are belonging to a joint family system and were unemployed. Most of them are polydrug users.

Instruments

The following instruments were used in the study:

Advance Warning of Relapse Questionnaire (AWARE)

The Advance Warning of Relapse Questionnaire (AWARE; Miller & Harris, 2000) consists of 28 items. Sahar & Naqvi, (2020) translate in Urdu version. In the present study, we use the Urdu version of this scale. The reverse item of this scale is 8, 14 20, 24, 26. The response set for all items employs a 7-point Likert scale from 1 (Never) to 7 (Always). The high score indicates more warning signs of relapse (Miller & Harris, 2000).

Drug Abstinence Self-Efficacy Scale

The DASE is a 20-item inventory evaluating drug abstinence self-efficacy from alcohol and drug use (DiClemente, Carbonari, Montgomery, & Hughes, 1994). No reverse item of this scale. This scale is structured according to four dimensions (1) Negative effect containing 5 items 18,16,3,14,6 (2) Social Situation and Positive Emotion,15,20,4,17,8 (3) Physical and Other Concern 2,12,5,13 (4) Withdraw and Urge 1,7,11,10,19 DASE included the 4 subscales. The questions asked of the participant's confidence in abstaining from (not at all = 1 to extremely = 5). Alpha reliability was found to be higher for this construct i.e., α = 90. The value of internal consistency was acceptable for all four subscales.

Self-Report Family Inventory version II

The original Self-Report Family Inventory, initially comprising 44 items (Beavers et al., 1990), underwent modification by Beavers and Hampson, reducing it to 36 items. The resulting SFI (I) serves as a 36-item tool evaluating perceptions of family functioning across five domains: Health Competence (items 2, 3, 4, 6, 12, 15, 16, 17, 18, 19, 20, 21, 24, 25, 27, 28, 33, 35, 36), Conflict (items 5, 6, 7, 8, 10, 14, 18, 24, 25, 30, 31, 34), Cohesion (items 2, 15, 19, 27, 36), Leasdership (items 8, 16, 32), and Expressiveness (items 1, 9, 13, 20, 22). This instrument, aligned with the Beavers systems model of family functioning, serves as a screening tool to assess a family member's perspective on overall family competence.

The response set for most items (1 to 34) employs a 5-point Likert scale, ranging from 1 (fits our household very well) to 5 (does not fit our household at all), except for the final two items (35 and 36), which use a specific 3-point rating scale (1 for YES: fits our family very well, 3 for some fits our family somewhat, and 5 for NO: does not fit our family). Lower scores across all Self-Report Family Inventory scales indicate higher family competence. The Self-Report Family Inventory-II Urdu version was utilized in this study. Certain items within the inventory are reverse-coded, including (items 18, 19, 24, 25, 27, 5, 8, 10, 13, 14, 19, 30, 31). The reliability of the scale, as measured by Cronbach's alpha, ranges between .84 and .88. For the subscales, Cronbach's alpha values range from .84 to .87 for Family Health and 50 to 59 for Conflict.

Table 2

Descriptive Statistics and Alpha Reliability Coefficient of the Study Variables (N = 300)

					Range			
Variables	*M*	*SD*	*K*	A	Potential	Actual	Skew.	Kurt.
RT	120.67	29.07	27	.91	27-189	53-189	-.14	-.54
PFF	114.43	19.59	36	.86	36-180	60-165	-.53	.01
DASE	48.87	13.90	20	.91	20-98	20-100	.56	1.13

NE	12.51	4.22	5	.78	5-25	5-25	.47	.37
SP	9.94	3.07	5	.69	5-25	5-25	.44	.48
POC	12.10	3.90	5	.74	5-25	5-25	.52	.74
WU	11.72	3.77	5	.71	5-25	5-24	.36	.13

Note. M = Mean, SD = Standard Deviation, Skew = skewness, Kurt = kurtosis, RT = Relapse Tendency, FF = Family Functioning, NE= Negative Effect, SSP = Social Situation and Positive Emotion, POC = Physical and Other Concern, WU=Withdraw and Urge

Table 3
Pearson's Correlation of the Study Variables (N = 300)

SR.no	Variables	1	2	3	4	5	6	7	8
1	RT	-	.64**	.26**	-.27**	-.18**	-.20**	-.26**	.17**
2	PFF		-	-.27**	-.29**	-.20**	-.20**	-.27**	.14*
3	DASE			-	.91**	.86**	.88**	.88**	-.11*
4	NE				-	.72**	.74**	.75**	-.13*
5	SSP					-	.68**	.66**	-0.02
6	POC						-	.72**	-0.03
7	WU							-	-.20**

Note. RT = Relapse Tendency, PFF = Poor Family Functioning, DASE = Drug abstinence self-efficacy, NE= Negative Effect, SSP = Social Situation and Positive Emotion, POC = Physical and Other Concern, WU= Withdraw and Urge.

**p< .01. *p< .05

Table 4
Multiple Linear Regression Analysis (N = 300)

Variables	Model I			*95%CI*	
	B	*B*	*SE*	*LL*	*UL*
Constant	13.10**		10.65	-7.85	34.06
PFF	.77**	.57	.06	.64	.89
DASE	-.15	-.07	.09	-.34	.02
Reason for drug use	4.39**	.13	1.41	1.60	7.18
Prior treatment	5.44**	.10	2.38	.74	10.14
R^2	.67**				
F	73.14**				
ΔR^2	.45**				
ΔF	48.64**				

Note. CI = Confidence interval; *LL* = Lower Limit; *UP* = Upper Limit; PFF = PoorFamily Functioning; DASE = Drug abstinence self- efficacy.**

P< .01. *< .05

Table 5
Mediating Effect of Drug Abstinence Self Efficacy between Relapse Tendency and Poor Family Functioning Individual with Substance Use (N = 300)

Variables	*B*	SE	T	P	*95%CI*

					LL	*UL*
Direct effect						
PFF –DASE	-.07***	.02***	-3.53	.000	-.11	-.03
DASE-RT	-.41**	.06**	-2.61	.009	-.72	-.12
PFF-RT	.83***	.06***	13.45	.000	.71	.95
Indirect effect						
PFF-DASE-RT	.03**				.00	.06
Total effect						
	.86***	.06***	14.49	.000	.74	.98

Note. PFF = Poor family functioning; DASE= Drug abstinence self-efficacy; RT =Relapse tendency. $^{**}p < .01$. $^{*}p < .05$.

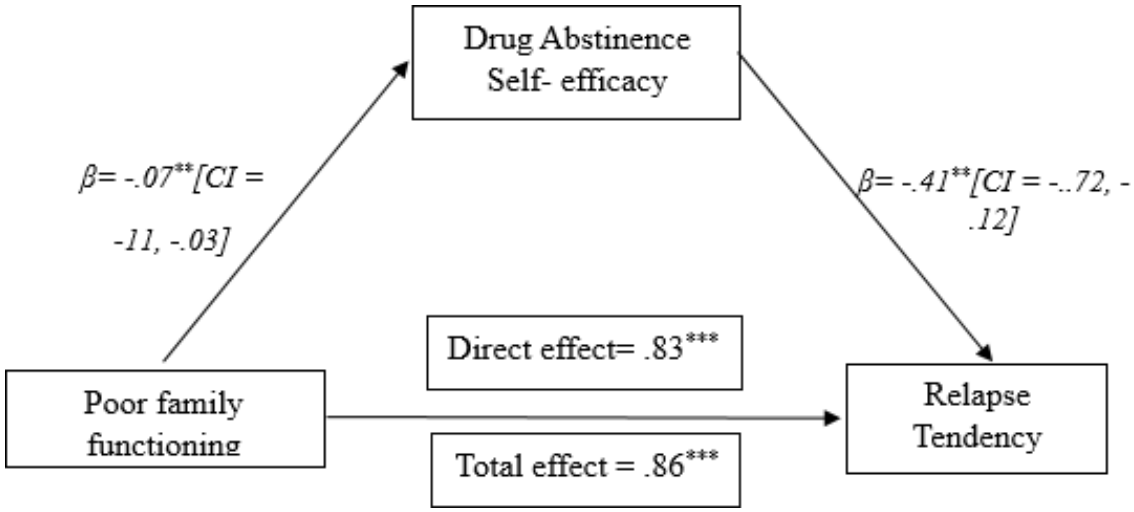

Figure 2: Mediating Role of Drug Abstinence self–efficacy between Poor Family Functioning and Relapse Tendencies (N=300)

The results revealed that individuals with higher self-efficacy were less likely to relapse, while those with lower self-efficacy had a higher risk of relapse. Another study investigated the role of self-efficacy in predicting relapse among individuals with cocaine dependence, showing that individuals with strong self-efficacy beliefs were less likely to relapse even in the presence of high levels of craving. This study highlights the protective effect of self-efficacy against relapse, particularly in difficult situations.

Self-efficacy refers to an individual's confidence in resisting relapse and maintaining recovery. Higher self-efficacy levels have been associated with a reduced tendency to relapse and the ability to manage challenging family dynamics (Brown & Davis, 2019). Self-efficacy may mediate the relationship between family functioning and relapse by affecting an individual's confidence in coping with family-related stressors and triggers (Zeng & Tan, 2021).

In a study by Schell et al. (2005), the relationship between family substance use and drug outcome expectancies among college students was examined. The findings indicated that individuals with drug-using family members were more likely to have positive drug outcome expectancies, including beliefs about the beneficial effects of drug use and its social advantages, compared to those without familial drug use. Beatty et al. (2008) explored the link between teenagers' drug outcome expectations and parental substance use. The results showed that teenagers with drug-using parents had significantly higher drug outcome expectancies, including beliefs about the benefits of drug use and its ability to reduce negative emotions, compared to those without parental drug use.

Conclusion

The present research can be thus concluded as providing the support for the relapse tendency and family functioning, mediation role of drug abstinence self-efficacy among individuals with substance use, which for the current study is interpreted in terms of Relapse tendency positively correlate with poor family functioning. The correlation, regression, mediation analyses and model testing provide evidence in support of our proposed model. Poor family functioning plays a significant positive role in contributing to the relapse of individuals with substance use. A significant negative correlation is found between drug abstinence self-efficacy and relapse tendency, emphasizing the importance of self-efficacy in maintaining abstinence. Drug abstinence self-efficacy emerges as an important mediator between poor family functioning and relapse tendency.

Recommendations

The methodology employed in the current study possesses certain limitations that could potentially impact the outcomes. Firstly, the reliance on self-report scales introduces a risk of self-presentational bias. While gathering subjective data on family functioning and drug abstinence self-efficacy directly from participants is appropriate, using only one informant may lead to skewed results.

Moreover, in this study, participants provided reports on their family functioning from their perspectives, but there was a lack of inquiry into family members' perspectives on the same issues. It is recommended that future researchers adopt a multi-informant approach, involving questioning not only the participants but also their family members and significant others. The data collection process was hindered by the complexity of Likert-type scales, which were challenging for our study sample to comprehend. This led to prolonged test administration times and efforts to minimize researcher bias.

Limitations and Suggestions

The current research did not examine the influence of religion and culture on behaviour, although these factors are known to shape attitudes and behaviours significantly. Given the importance of religious and cultural contexts in relapse prevention among individuals with substance use issues, future studies should include these considerations.

Furthermore, participants reported on their family functioning from their own perspectives, without considering the perspectives of their family members. Future research should adopt a multi-informant approach, involving input from participants, their family members, and significant others. The data collection process was also complicated by the complexity of Likert-type scales, which were challenging for the study sample to understand. This resulted in prolonged test administration times and efforts to minimize researcher bias.

Implication of the Study

The results of this study carry significant implications that contribute to our theoretical understanding of relapse tendencies from a psychological standpoint. The studyunderlines the pivotal role of family functioning in shaping the development of responsibility among adults, shedding light on the intricate interplay between familial dynamics and relapse propensity. Understanding the influence of family functioning on predicting relapse tendencies suggests the importance of integrating family therapy approaches into treatment programs. By involving family members in therapy sessions, clinicians can address dysfunctional family dynamics, potentially alleviating stressors that contribute to relapse occurrences.

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