




# Resilience and Influencing Factors Among Youths Undergoing Substance Abuse Treatment in Thailand: A Cross-Sectional Study

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## Abstract

**Introduction:** Resilience aids rapid recovery from substance abuse, prevents the likelihood of relapse, and improves the quality of life of the youths with substance abuse.

**Objective:** This study aimed to assess the resilience level and related factors predicting resilience among youths undergoing substance abuse treatment in Thailand.

**Methods:** A descriptive cross-sectional design with a simple random sampling technique was used. A total of 430 young substance abusers undergoing treatment were recruited from ten treatment centers in Eastern Thailand from April to June 2021. Data were collected using nine questionnaires: demographic form, resilience questionnaire, Rosenberg self-esteem questionnaire, psychological flexibility for substance abuser questionnaire, cognitive fusion questionnaire, substance abuse self-stigma scale, family connectedness scale, friendship intimacy questionnaire, and personal resource questionnaire. Descriptive statistics and stepwise multiple regression were used to analyze data.

**Results:** The results showed a high level of resilience (89.30%) among the youths undergoing substance abuse treatment. The stepwise multiple regression analysis revealed that the significant factors associated with resilience include self-esteem ( $\beta = 0.260, p < .001$ ), psychological flexibility ( $\beta = 0.222, p < .001$ ), social support ( $\beta = 0.209, p < .000$ ), and family connectedness ( $\beta = -0.194, p < .001$ ). All the variables collectively explained 26.9% of the variance for resilience among the youths with substance abuse ( $R^2 = .269, p < .001$ ).

**Conclusion:** Determining resilience and its related factors among the youths undergoing substance abuse treatment is significant as it guides the formulation of the substance abuse treatment programs, improves mental health and quality of life, and prevents relapse.

## Keywords

substance abuse, resilience, family connectedness, psychological flexibility, youths

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## Introduction

Substance abuse is the most pervasive and significant public health problem that has increased tremendously among youths (Coughlin et al., 2021). Young people are the most important driving force for change in society. However, ironically, they become non-productive while indulging in

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substance abuse, which is a scourge for the overall development of a country. In Thailand, substance abuse has been a major social problem that has affected teens and youths for several decades (Saingam, 2018). Approximately 2.9 million substance abusers were reported in 2016, and around 87,491 cases were registered for the treatment throughout the country (Kanato et al., 2016). In 2019, the Department of Ministry of Public health, Thailand, reported 2.7 million Thai youths as amphetamine users (Department of Mental Health, 2019). The adverse effects of substance abuse reported in Thailand were criminal activities, increased morbidity and mortality rate, premature death, and burden of disease (Saingam, 2018). In 2020, 21% of substance abusers receiving treatment belonged to the age group between 24 and 29 years, and 26.49% between 15 and 24 years, thus, indicating many youths will receive treatment in the future (Nardilok, 2020). Moreover, the initiation of the use of substances was found at a very young age, in early adolescence. For instance, a survey conducted in the U.S. health and substance abuse in 2014 found that 27 million people over 12 years old had high rates of substance abuse (Substance Abuse and Mental Health Service Administration, 2016). Also, another report revealed the initial age of drug exposure as 12 years among teenagers (United Nations Office on Drugs and Crime, 2004).

The period spent as a youth represents a critical time in an individuals' life. It is a transitional phase from adolescence to adulthood where individuals undergo crucial changes in their physical, emotional, psychological, economic, and social life (Zaky, 2016). They struggle to develop a sense of identity and are likely to seek new experiences, attention, and acceptance from people around them. Youths have a major motivating and emotional force that drives them to indulge in risk-taking behaviors like teenage pregnancy, substance abuse, aggression, and sexual risk behaviors leading to sexually transmitted diseases (Steinberg, 2017). Young people who persistently abuse substances have a significant impact on their physical and mental health and social life. In addition, their family's emotional and financial resources also get depleted (Bureau of Justice Statistics, 1992). Thus, it is imperative to focus on building resilience to protect the youths from the negative effects of substance abuse and withstand adversities. Furthermore, understanding the resilience level and its influencing factors among youths with substance abuse may aid in developing recovery programs and have significant public health implications.

## Review of the Literature

Resilience is a dynamic process and an essential protective factor in preventing teenagers' drug abuse (Luthar et al., 2000). It is an individual's ability to overcome difficulties or incidents causing stress rapidly and effectively. This often leads to better changes in an individual life. Resilience comprises three components: (1) "I have" refers to the presence of external support, (2) "I am" refers to the

presence of internal support, and (3) "I can" refers to the presence of problem-solving skills and the maintenance of interpersonal relationships (Grotberg, 2003). A study found that the resilience and the perceived level of life crisis varied among the two groups of teenagers with experience of substance abuse and external support and non-abusers (Lhimsoonthon, 2000). In addition, resilience is significant as it is a comprehensive approach that prevents substance abuse and problem behaviors and promotes positive youth adaptation in various aspects (Meschke & Patterson, 2003).

The resilience model recommends that teenagers' substance abuse can be decreased by increasing their protective factors. The protective factors include internal factors such as individuals' physical and psychological characteristics, and external factors include family or other health care agencies. These factors influence the adaptation process to adversity (Mandleco & Perry, 2000). The literature suggests that some variables predict resilience. For instance, a study found self-esteem was positively associated with resilience (Benetti & Kambouropoulos, 2006). Another study on the Thai youths receiving treatment in the outpatient departments revealed that resilience was associated with low self-esteem and with three stress-coping methods: self-efficacy reliance, supporting resource dependence, and problem avoidance (Soontornchoti, 2011). However, it is requisite for illicit drug users to think of "reaching the transition" and "hope for a better future" to develop resilience and prevent substance abuse (Stajduhar et al., 2009). Overall, resilience helps individuals develop a capability to cope with their crisis effectively and fosters their future success.

In the context of external factors that promote resilience, social support plays an inevitable role in determining the age of initial exposure to drug use. A previous study found that sensitive children with experience of less caregiving had an increased tendency to get exposed to substance abuse at a younger age than well-cared children. They tried using other substances simultaneously after their initial exposure (Ciarrano et al., 2009). Another study revealed self-confidence and socializing skills to predict the youths' resilience to encountering risks (Fergus & Zimmerman, 2005). In addition, research exploring the causes for drug abstinence found that family connectedness and friendship intimacy support resilience in reducing substance abuse (Davis & Spillman, 2011). This demonstrates the significance of social factors in improving resilience.

The above empirical evidence explicitly highlights the importance of resilience that aids in teenagers coping with emotional and psychosocial problems. Resilience also strengthens endurance for negative emotions (Konaszewski et al., 2021). Hence, comprehension of the factors affecting resilience in young substance abusers is significant.

Substance abuse is declared a priority and one of the serious problems on the national agenda in Thailand (Saingam, 2018). Therefore, enhancing resilience in an individual by integrating interpersonal and intrapersonal factors

could prevent substance abuse and the likelihood of relapse. In addition, the factors related to resilience are important as they may aid in creating cognizance in individuals and their family members, formulating drug prevention programs, and organizing activities that promote resilience in youths with substance abuse. Furthermore, there are limited studies on resilience among substance abuse youths undergoing treatment in Thailand. Hence, this study aimed to assess the resilience level and related factors predicting resilience among youths undergoing substance abuse treatment in Thailand.

## Methods

### Design

A descriptive cross-sectional design was employed to assess the level of resilience and its predicting factors among youths undergoing substance abuse treatment in the eastern region of Thailand. This study was conducted from April to June 2021.

### Sampling

The sample for this study included youths undergoing substance abuse at treatment centers in the eastern region of Thailand. The treatment centers had around 800 substance abusers undergoing treatment. A simple random without replacement sampling technique was used to obtain the 430 samples from ten treatment centers.

### Inclusion and Exclusion Criteria

The samples who met the inclusion criteria were recruited for the study. The inclusion criteria included (1) youths aged 18–25 years old undergoing treatment for amphetamine abuse, (2) being able to understand, read, and write the Thai language, (3) no hearing impairment, (4) exhibiting no withdrawal symptoms like headache, jactitation, or distraction, and (5) willing to participate in the study and available during the data collection period. Youths with physical and mental disturbance who couldn't provide information were excluded from the study.

### Research Instruments

The research instruments are comprised of nine parts. Permission was obtained from the original authors for each instrument for its usage and translation. Three English instruments (psychological flexibility in substance abuse, cognitive fusion, and substance abuse self-stigma scale) were translated to Thai using the back-translation technique to ensure content validity and cultural equivalence. Initially, the original English version of the questionnaires was translated to Thai, and then consequently, the Thai version was back translated to English by bilingual experts. Finally, the two versions of the questionnaires were compared, and a final version was selected. Three

experts from nursing, psychology, and psychiatry evaluated the content of the final questionnaires using the content validity index (CVI) for its relevance, objective content, and appropriateness in context, culture, and language (Polit & Beck, 2006). Each of the questions had a content validity ratio (CVR) value of 1.00. All the three instruments had good CVIs of 1.00. The reliability of research instruments was examined for their internal consistency by carrying out a pilot study of 30 youths who met the same criteria.

The questionnaire included items to obtain demographic information and to measure the factors predicting resilience (Table 1).

### Statistical Analysis

The data analysis was performed using the SPSS software, version 21. Descriptive statistics was used to analyze the sample demographic characteristics in the means of frequency, percentage, mean, range, and standard deviation. Pearson product-moment correlation coefficients were used to find the correlation between independent and dependent variables. The assumptions were tested before the statistical analysis. Finally, a stepwise multiple regression analysis was used to analyze the predictors influencing the resilience among the youth substance abusers at the significance level of  $\alpha = 0.05$ .

## Results

### Demographic Characteristics of the Participants

The final sample consisted of 430 participants, among which all were males with an average age of 22.30 years old ( $SD = 2.21$ ). About 81.40% of samples were single, and more than half (60%) were residing in urban areas. About 50.70% of the participants had a primary education level, in which 35.1% had their secondary educational level. Most of the participants were Buddhists (98.84%). Most were employed (51.86%) and worked in companies (12.56%). Nearly half of the samples (49.07%) had a monthly income of 5,000–10,000 Thai Baht (\$151–\$300), and 27.67% earned less than 5,000 Baht (< \$150). Their mean age of first substance abuse was 16.01 years old ( $SD = 2.36$ ), with of 8 years age found to be the earliest. Regarding their treatment history, 56% received their first-time treatment, and 26.51% received their second-time treatment with the highest number of treatments nine times. The average duration of treatment was 61.77 days ( $SD = 32.13$ ).

Around 77.67% of the participants were amphetamine users, 76.28% were cigarette smokers, 36.74% were marijuana users, and 52.79% were alcohol consumers (Table 2).

### Resilience

Concerning the resilience level among the youths undergoing treatment for substance abuse, 89.30% of the youths had a

**Table 1.** Research Instruments.

Name of the questionnaire	Purpose	Number of items	Total score range	Content validity index	Cronbach's alpha reliability
Resilience questionnaire (Lhimsoonthon, 2000)	Resilience	20	0–100	-	0.79
Rosenberg self-esteem Questionnaire (Silpakit & Silpakit, 2016)	Self-esteem	8	8–32	-	0.82
Psychological flexibility in the substance abuser questionnaire (Luoma et al., 2011)	Psychological flexibility	18	18–178	1.00	0.80
Cognitive fusion questionnaire (Gillandersa et al., 2014)	Cognitive fusion	7	7–49	1.00	0.84
Substance abuse self-stigma scale (Luoma et al., 2013)	Self-stigma	40	40–200	1.00	0.85
Family connectedness scale (Resnick et al., 1997)	Family connectedness	12	12–60	-	0.80
The friendship intimacy questionnaire (Buhrmester, 1990)	Friendship intimacy	12	12–60	-	0.83
The personal resource questionnaire (PRQ 2000) (Weinert, 2000)	Social support	15	15–105	-	0.93

high level of resilience, 10.50% had a moderate level, and very minimal youths for about 0.20% had a low level (Table 3).

### Predictors of Resilience

The Pearson product-moment correlation coefficients showed that variables such as self-esteem, psychological flexibility, cognitive fusion, self-stigma, family connectedness, friendship intimacy, and social support were positively correlated with the resilience level of youths undergoing substance abuse treatment (Table 4).

The stepwise multiple regression analysis showed that the social support, psychological flexibility, self-esteem, and family connectedness had a positive association on the intention of drug abstinence and are statistically significant with an explained variance of 26.20% that could predict resilience among the youths undergoing substance abuse treatment (Table 5).

On the other hand, factors such as cognitive fusion, self-stigma, friendship intimacy were not significantly associated with resilience among youths undergoing treatment in Eastern Thailand.

### Discussion

This study aimed to assess the resilience level and related factors predicting resilience among youths with substance abuse undergoing treatment. The findings revealed that majority of the youths (89.30%) had a higher level of resilience, although one study found moderate levels of resilience (75.5%) among teenagers with substance abuse undergoing treatment (Ibrahim et al., 2013). These differences may exist due to disparities in the age group, as the participants in this study have a mean age of 22.3 years. A large body

of research has demonstrated the resilience as a vital psychological resource for individuals to maintain or recover high subjective well-being while confronting difficulties. It also found that individuals with resilience were less likely to be involved in substance abuse that indirectly led to better life satisfaction (Cuomo et al., 2008; Satıcı, 2016; Wolf et al., 2018). The current study revealed that the selected factors such as social support, psychological flexibility, self-esteem, and family connectedness were correlated and significantly positively associated with resilience among the youths with substance abuse. Identifying factors associated with resilience may help the substance abuse youths prevent its progression towards a severe level is noteworthy.

Social support could be related to resilience and psychopathology through various psychological and behavioral mechanisms. It is a key correlation to psychological resilience. Social support from ones' family and community fosters the individual's resilience (Southwick et al., 2016). This is in accord with the current study, which found social support to have a positive association with resilience and was in line with another study that focused on the association of social support with the resilience among the secondary school students and teenagers with an unwanted pregnancy (Boonchu, 2012; Suntornvijitr et al., 2018). The finding can be viewed through the lens of Grotbergs' concept of resilience, which explains when individuals with resilience try to gain trust from others. Individuals believe they have external support and choose a role model from their family and society. Furthermore, resilience improves in the youths with substance abuse if they have access to health and education services and live in a secure environment to overcome the crisis (Grotberg, 2003). The youths undergoing substance abuse treatment need acceptance, affection, and reinforcement from society to exhibit their positive side. The findings also suggested that social support could indirectly develop

**Table 2.** Demographic Characteristics of the Participants (N = 430).

Characteristics	Frequency (n)	Percentage (%)
Gender		
Male	430	100.00
Age		
16–19 years	54	12.56
20–22 years	156	36.28
23–25 years	220	51.16
( $\bar{X}$ =22.30, $SD$ = 2.21, Min = 16, Max = 25)		
Marital status		
Single	350	81.40
Married	41	9.54
Widow	1	0.23
Divorced	4	0.93
Separated	17	3.95
Others	17	3.95
Religion		
Buddhist	425	98.84
Christian	1	0.23
Islam	4	0.93
Residence		
Urban	258	60.00
Rural	172	40.00
Education level		
Not studied/Below elementary	9	2.09
Primary school	218	50.70
Secondary school	151	35.12
High school/Under diploma	51	11.86
Diploma	1	0.23
Occupation		
Unemployed	59	13.72
General employee	223	51.86
Merchant/Personal business	55	12.79
Company employees	54	12.56
Farmer	31	7.21
Student	8	1.86
Income before substance abuse treatment		
<\$150	119	27.67
\$151–\$300	211	49.07
\$301–\$450	71	16.51
\$451–\$600	23	5.35
>\$600	6	1.40
Age of the first drug use		
8–15 years	206	47.91
16–20 years	209	48.60
21–25 years	15	3.49
( $\bar{X}$ =16.01, $SD$ = 2.36, Min = 8, Max = 25)		
Number of substance abuse treatment		
1st time	241	56.05
2nd time	114	26.51
3rd time	35	8.14

(continued)

**Table 2.** Continued.

Characteristics	Frequency (n)	Percentage (%)
4th time	20	4.65
5th time	7	1.63
>5th time	13	3.02
( $\bar{X}$ =1.82, $SD$ = 1.33, Min = 1, Max = 9)		
Duration of substance abuse treatment		
0–30 days	75	17.44
31–60 days	139	32.33
61–90 days	120	27.91
91–120 days	96	22.32
( $\bar{X}$ =61.77, $SD$ =32.13, Min = 1, Max = 120)		
History of substance abuse		
Amphetamine	334	77.67
Other substances used		
Cigarette	328	76.28
Ice	299	69.53
Alcohol	227	52.79
Marijuana	158	36.74
Heroin	12	2.79
Glue	19	4.42
Others	17	3.95

**Table 3.** Resilience Level of the Youths Undergoing Substance Abuse Treatment (N = 430).

Resilience	Frequency (n)	Percentage (%)
Low	1	0.20
Moderate	45	10.50
High	384	89.30
( $\bar{X}$ =78.59, $SD$ =10.619, Min = 30, Max = 100)		

psychological flexibility that improves resilience among the youths with substance abuse.

This study revealed psychological flexibility to have a positive association with the substance abuse youths with resilience. Individuals with resilience are ready to learn new things happily and often possess a high degree of psychological flexibility. They are ready to adapt to changes and improve themselves for a better life (Grotberg, 1995). Substance abusers with increased psychological flexibility will have effective adaptation skills and resilience.

A substantial body of studies has explored the relationship between self-esteem and resilience. In this study, the youths with substance abuse showed a higher self-esteem and positive association with resilience. This was in line with another study that revealed a positive correlation between resilience and self-esteem (Yang et al., 2019). A study in Thailand also revealed self-esteem to be positively associated with

**Table 4.** Pearson Product-Moment Correlation Coefficients Between Variables (N = 430).

Variables	Mean	SD	1	2	3	4	5	6	7	8
Self-esteem	24.21	3.921	1							
Psychological flexibility	78.86	15.936	-1.51**	1						
Cognitive fusion	29.77	9.310	-0.288***	0.493***	1					
Self-stigma	120.21	22.738	-0.265***	0.404***	0.552***	1				
Family connectedness	41.45	5.814	-0.073	0.266***	0.294***	0.320***	1			
Friendship intimacy	39.64	7.959	-0.090*	0.223***	0.163***	0.282***	0.323***	1		
Social support	79.83	7.959	0.197	0.251***	0.091*	0.083*	0.340***	0.348***	1	
Resilience	78.59	10.619	0.254***	0.287***	0.137**	0.145**	0.305***	0.199***	0.38***	1

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , value of 1 = each variable is perfectly correlated with itself.

**Table 5.** Stepwise Multiple Regression Results for Factors Associated With Resilience (N = 430).

Predictors	B	Standard error	Beta ( $\beta$ )	t-value	p-value
Constant	21.016	4.766		4.409	.000
Social support	0.177	0.039	0.209	4.500	.000
Psychological flexibility	148	0.030	0.222	4.97	.000
Self-esteem	0.705	0.118	0.260	5.979	.000
Family connectedness	0.354	0.083	0.194	4.285	.000

B = unstandardized regression coefficient, SE = standard error,  $\beta$  = standardized regression coefficient, t = t-statistics.  $R^2 = 0.269$ ; Adjusted  $R^2 = 0.262$ ;  $R = 0.519$ ;  $F_{4, 425} = 39.155$ ;  $p < .001$ .

university students' resilience at a moderate level (Sirathatnararajana et al., 2016). This can be explained by the fact that an increase in self-esteem is a chain process that leads to an increase in self-confidence, self-respect, resilience, and escalated indomitable values (Karatas & Savi, 2011). Individuals with high resilience have optimistic thoughts about themselves, feel confident and capable and try to control their maladaptive emotions; these serve as vital elements of resilience (Grotberg, 1995). Higher self-esteem increases an individual's resilience and aids in indulging in adaptive behaviors.

The results of the current study also indicated that no significant relationship was found between cognitive fusion, self-stigma, friendship intimacy, and resilience. Friendship intimacy could be related to one of the theories of delinquency in which social control theory asserts deviant individuals to have poor interpersonal relationships. This was reflected in the findings of the current study. Although on the contrary, one study found that male illicit drug users have a higher level of intimacy (Kandel & Davies, 1991). In addition, self-stigma is often seen among substance abusers since they have both internal and external negative perceptions of society (Luoma, 2010). Also, individuals with high self-stigma have low self-esteem, feel powerless, and decreased quality of life. They lack confidence in abstaining from drugs and avoid receiving treatment (Crapanzano et al., 2019). Hence, it is imperative to promote self-esteem among the substance abusers during the treatment process. It is a requisite to retrieve their optimistic thoughts towards self, set better life goals, and realize

support from other groups of people not limited to only their friends. The self-stigma and cognitive fusion assessments in this study were insufficient to predict resilience.

Youths with higher family connectedness show better outcomes and are defensive against various behavioral outcomes, including levels of substance use, psychological distress, suicidality, and violence (Resnick et al., 1997). This study revealed a positive correlation between family connectedness and resilience of youths with substance abuse. This could be interpreted that the family plays an inevitable role in developing an individuals' cognitive and behavioral domain, and individuals with satisfactory family connectedness possess a high degree of resilience.

This study broadens the horizon about resilience and the interplay of various factors such as self-esteem, psychological flexibility, cognitive fusion, self-stigma in substance abuse, family connectedness, friendship intimacy, and social support in predicting the resilience level among youths undergoing substance abuse treatment in Thailand. These results also imply that there should be an increased focus on the innate resilience: personal characteristics and acquired resilience: by strengthening the social and environmental factors such as their family or peer groups to improve the resilience among the youths under substance abuse treatment. A significant consideration is required to examine the factors influencing resilience in the social context. Understanding the factors' predicting resilience among the youths during the treatment process is paramount for the treatment effectiveness and speedy recovery.

## Strengths and Limitations

The strength of this study is that it sheds light on the resilience approach for the effective recovery of the youths with substance abuse. It also provides direction in formulating psychosocial interventions for substance abuse treatment. The limitation is that, since the study included the participants only from the treatment centers of a specific province (eastern) of Thailand, it affects the generalizability of the study findings to other provinces.

## Implications for Practice

The findings of the current study have significant implications for nursing practice. The association of social support and family connectedness with resilience emphasizes the need for educating the family members about the role of emotional support and their participation in the recovery process of the youths. Also, these findings may aid nurses in collaborating flexibly with family members while providing care for the youths under treatment. It further serves as a guideline for formulating substance abuse treatment programs and promotes mental health among youths with substance abuse. In addition, this study supplements the existing literature by having significant policy implications targeting the interventions and rehabilitation of the drug abusers under treatment.

## Conclusion

In this study, most youths had a high level of resilience undergoing substance abuse treatment. Factors such as self-esteem, psychological flexibility, social support, and family connectedness were significantly associated with resilience among youths with substance abuse. It is beneficial to organize activities and recovery programs to enhance resilience among substance abuser youths undergoing treatment emphasizing social support, psychological flexibility, self-esteem, and family connectedness. The combined factors in varied contexts can provide insight and understanding into the youths' treatment process. It also recommends that increasing attention should be paid to both personal and external resilience factors or support that assists during adversity. These findings could direct future research and serve as a comprehensive guideline for promoting and preventing substance abuse and its treatment policies.

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## Author Contributions

JCD and PJ developed the conceptualization, methodology, investigation, and interpreted the data. DV and SM contributed to data collection and data analysis. SN and NK contributed to the methodology, manuscript writing, and revised it critically for important intellectual content. All the authors have reviewed and approved the final draft before submission.

## Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.



## Ethical Consideration

This study obtained ethical approval from the Burapha University - Institutional Review Board for Protection of Human Subjects in Research (BUU-IRB) with an approval number (HS006/2563). Formal permission was obtained from the higher authority of the treatment centers. The participants were informed about their rights of participation and withdrawal. All participants agreed to participate voluntarily and provided a written informed consent. The data were kept strictly confidential, and anonymity was maintained using code numbers. The researchers adhered to the ethical principles throughout the study.

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