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A Prospective Study of Psychological and Social Variables as Predictors of Methamphetamine use (Shabu) among Young People in Al-Jouf Region

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Abstract

The abuse of shabu drug leads to addiction, degradation, psychological, physical, social and economic diseases for the individual and the society. This research aimed to identify some of the psychological and social determinants among a sample of shabu users in the Jouf area. To achieve this goal, a sample of shabu drug users and frequenters of addiction treatment clinics was selected; as well as a sample of non-users of shabu drug as a control group. Data were also collected and analysed using various methods and statistical techniques. The most important results indicated a simple correlation between age, social status, education level, residence pattern, family history of drug use, abnormal family climate, Impulsiveness, Somatization, Interpersonal Sensibility, depression, anxiety, and paranoid ideation. While no correlation was proven between monthly spending, working status, normal family climate and Venturesomeness. At the level of multiple relationships, no effect of any of the variables was evident in the binary logistic regression model in this research. These results were also discussed, and many recommendations were mentioned.

Keywords: Psychological Determinants, Social Determinants; Drug Users; Binary Logistic Regression; The Kingdom of Saudi Arabia

Introduction

Drug abuse is one of the rapidly growing health problems worldwide; Methamphetamine production and supply appear to be increasing, especially in East and Southeast Asia. According to the 2018 World Drug Report, which reported that approximately 34 million people use amphetamine stimulants worldwide. (Chang et al., 2018). In Saudi Arabia, as in many other developing countries, it is a highly growing health issue (Hashisha, et al.,2022), Over the past five years, Saudi Arabia has experienced a sharp increase in the use of methamphetamine (Alageel, et al., 2023). This was initially noted informally by anecdotal reports in the media and then more formally by increases in admissions for methamphetamine-related substance use disorders to specialist substance abuse treatment centres, and later confirmed by high school surveys (Degenhardt, L. et al. 2018).

By 2020 over 40% of individuals admitted to various substance abuse treatment facilities reported methamphetamine as their primary substance of abuse and within two years, methamphetamine had become the most common primary substance of abuse for those admitted for substance abuse treatment, surpassing the previous dominance of alcohol (Plüddemann A, et al., 2010). In general, there are many factors and causes for the phenomenon

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of abuse and addiction, the omission of some factors or the reasons, or the shortcomings in the tools and processes of measurement and diagnosis, are reflected in the effectiveness of the preventive, therapeutic, rehabilitative intervention, and this is the justification for adoption of the perspectives that combine the different interpretations of addiction and abuse. And based on the multiplicity of theoretical visions about how addictive behavior and addictive personality are formed, we can finally arrive at the types of addictive personality resulting from addictive behavior or abuse, as follows: (Mitchell, & Potenza, 2014; Griffiths, 2017).

- Immature person who cannot rely on himself and be independent and does not trust his abilities to manage his life matters and his social interactions with others.
- Selfish person who insists on obtaining his desires immediately and cannot wait or postpone obtaining what he wants later.
- Anxious person who resorts to external factors such as narcotics to achieve peace and tranquillity, which leads to him falling prey to addiction.
- Impulsive person who does not appreciate the consequences of things, and rushes after his instincts without regard to religious or moral standards.

Research Statement and Objectives

Although countries around the world are reporting increased use of new psychoactive substances, these have not replaced the widespread use of traditional drugs (UNODC, 2019). While opioids continue to pose a major public health threat globally, amphetamine-type stimulants are now not far behind. According to the 11th revision of the International Classification of Diseases (ICD) (WHO, 2019a).

Statistics indicate that rates of methamphetamine abuse are increasing in many countries, in the United States of America, for example, during 2015-2018, around 1.6 million adults, on average, used methamphetamine every year, and approximately 25% of them reported using methamphetamine by injection. In addition, approximately 50% of people who used methamphetamine in the past year met diagnostic criteria for methamphetamine use disorder in the past year (Jones, et al., 2020).

In the Kingdom of Saudi Arabia, as an Islamic country, social norms and values are deeply rooted in religion. There is religious as well as legal prohibitions against the possession or use of alcohol and narcotic substances, however, a portion of Saudis consume alcohol and abuse drugs. About 7 to 8% of Saudis report that they use drugs; 70% of them are 12–22 years old. The most abused substances among Saudis are amphetamines, heroin, alcohol, and cannabis, and a majority are addicted to multiple substances (Saquib, et al., 2020).

Hence, there is a need to ask about the psychological and social variables associated with methamphetamine use among Saudi youth, and thus the need to answer the main research question: “What are the psychological and social variables that predict the use of methamphetamine (Shabu) among young people in the Jouf area?”. To answer this question, the current research will seek to achieve the following objectives:

- Identify the relationship between some personality, mental health traits and family climate among young methamphetamine (shabu) users in The Jouf area.
- Testing a model of use of methamphetamine (Shabu) by young people in the Jouf area as a function of some personality, mental health traits and family climate.

Importance and Significance

The current research has many importance and significance at theoretical and practical level as follows:

- Providing a specific framework for interpreting the behavior of drug users.
- Presenting an integrated psychological-social model that explains abuse.
- The terrible prevalence of synthetic amphetamines among drug users in the last two years, confirms the urgent need to identify the psychological and social dimensions and variables of Methamphetamine users.

Conducting specialized preventive and awareness programs that deal with interest in the psychosocial variables affecting the prediction of Methamphetamine abuse.

Implementing integrated treatment programs that include dealing with all psychological and social variables that resulted in the personality of amphetamine abusers.

Revealing the psychological and social characteristics of abusers may contribute to providing psychological/social support and working on prevention in future generations, and that information can be used as the basis for developing and testing interventions aimed at preventing the initiation of drug use, reducing harm, and improving and designing rehabilitation programs.

Literature Review

Methamphetamine use is a growing public health concern worldwide, it's leading to a cascade of adverse effects. The psychological symptoms associated with it are the most common adverse consequences among Methamphetamine users compared to the general population, and often include multiple dimensions of cognitive impairment and induce adverse consequences such as violence and suicide (Chang et al., 2018).

Methamphetamine addiction is one of the most serious health problems as it is a highly addictive drug and its use is strongly linked to severe aggressive behavior and violent crimes (Hashisha, et al.,2022), and it can affect mental health, causing depression, anxiety, and psychoses, as well as have prominent behavioural effects, including aggression and impulsivity (Maxwell, 2005). Studies of methamphetamine users have also indicated cognitive impairment, including memory loss concentration problems, and irreversible neuronal damage (Zweben, et al., 2004). These potential side effects are perhaps of relevance to school-going adolescents, who are required to engage in cognitive tasks and conform to a certain convention of behavior while attending school. Moreover, the negative impact of substance use on school performance has a carry-over effect into adulthood, impeding opportunities for tertiary education and being associated with lower income, unemployment, and lower life satisfaction (Fergusson & Boden 2008). Another study showed the relationship between the use of methamphetamine and other drugs and not attending high school (Plüddemann A, et al., 2010).

Regarding the psychological and social factors related to the use of narcotics, the study by Gunnarsson, M. (2012) also indicated psychological factors associated with an increased risk of drug use in adolescence, such as gender, personality traits, mental health, as well as family situations. It found that the traits associated with the consumption of hazardous substances were mainly hostility and impulsivity, and there were additional factors, such as problems within the family and individual mental health. As Adewumi's study (2017), concluded that

there was a significant influence of religiosity and self-esteem on substance abuse among university students, it also revealed that religiosity and self-esteem jointly predicted substance abuse among undergraduates.

In the same context, the study by Gong et al (2021), aimed to explore the factors that had a more significant impact on the desire to take narcotic substances, Correlation analysis showed that life events, positive psychological capital, interpersonal trust, and security of Psychological and family intimacy negatively predicted substance cravings. In contrast, aggressive behavior, impulsivity, alexithymia, parental conflict, and deviant peers positively predicted substance cravings. In contrast, aggressive behavior, impulsivity, alexithymia, parental conflict, and deviant peers positively predicted desire to use substances.

As regards personality traits, Zilberma et al. (2018), study compared the personality traits of several types of addictions (drug and alcohol addiction), and (addiction to behaviors such as gambling and sex). It found that impulsivity and neuroticism were higher in all categories of addicts, there was a significant decrease in the traits of extraversion, agreeableness, and openness to experience, and people with substance use disorders also scored lowest in the traits of agreeableness and conscientiousness.

In the Kingdom of Saudi Arabia, the study of Alageel et al (2023) on a group of young people who used cannabis and amphetamines concluded that they are at risk of developing medical symptoms, and the rate of injuries and accidents among them rises to 15.3%.

Another study showed (Almarhabi, et al., 2018) That Amphetamines and alcohol were the first substance abused and a younger age at the time of the first substance abuse was associated with a higher probability of driving under the influence of an abused substance.

Cross-sectional studies have identified variables associated with substance abuse, the most reliable being socio-demographic variables such as age, gender, education, marital status, living situation, and employment history. Users with substance abuse are more likely to be male, young, and single, with low education and low incomes (Fleury, et al., 2014).

Research Hypotheses

To achieve the research objectives and according to the literature, the following research hypotheses were developed and tested, after being put into its zero form:

H1: *There is a significant association between (Age; Social status; Level of education; Working status; Monthly spending; Residential pattern and the family History of drug users) and the Shabu use/ non-use.*

H2: *There is a simple correlation between the degree of (abnormal family climate; Impulsiveness; Venturesomeness; Somatization; Interpersonal Sensibility; Depression; Anxiety and Paranoid Ideation) and the Shabu use/ non-use.*

H3: *The probability of linking each of the variables (abnormal family climate; Impulsiveness; Venturesomeness; Somatization; Interpersonal Sensibility; Depression; Anxiety and Paranoid Ideation) in combined and the Shabu use/ non-use.*

Methods and Techniques

Research Sample

The research sample consisted of two groups: the first group does not use drugs(shabu), and a

group of users' methamphetamines (shabu), who opiate frequent psychiatric clinics in the Jouf area. Each group consist of an appropriate number of participants between the ages of (18 to 40) years. And they equalized with the control group in some demographic variables (such as, level of education, age, etc.), which would affect the results of the research. As for choosing the age group for the study, which ranges between (18 and 40) years, the results of the studies indicated that the focus of most dependents on narcotic substances is in the age group. As for the exclusion criteria, they are the presence of accompanying psychological or mental disorders, the presence of organic brain injuries due to exposure to some accidents and having a history of psychiatric or mental illness.

As shown in Table No. (1), the frequencies and percentages of certain socioeconomic characteristics of the sample of users and non-users are presented.

Table 1: Frequencies and Percentages were Calculated for the User Group, the non-User Group and Total Sample.

Total Sample n = (72)		Shabu non-user Group n = (40)		Shabu user Group n = (32)		Variable
%	f	%	f	%	f	
						Age
23.6	13	29.0	9	16.7	4	18-22
49.1	27	71.0	22	20.8	5	23-30
27.3	15	=	=	62.5	15	31 or more
						Social status
72.7	48	91.2	31	53.1	17	Married
27.3	18	8.8	3	46.9	15	Unmarried
						Level of education
67.2	43	91.2	31	40.0	12	Graduate
32.8	21	8.8	3	60.0	18	Undergraduate
						Working status
30.8	20	20.6	7	41.9	13	Working
69.2	45	79.4	27	58.1	18	Notworking
						Monthly spending (The Saudi Riyal)
56.7	34	61.1	22	50.0	12	1000-3000
43.3	26	38.9	14	50.0	12	3500-9000
						Residential pattern
68.1	49	57.5	23	81.3	26	With the family
31.9	23	42.5	17	18.8	6	Alone
						The family History of drug users
14.1	10	2.5	1	29.0	9	Presence of users
85.9	61	97.5	39	71.0	22	Absent of users
						Exposure to addiction treatment
54.8	17	=	=	54.8	17	Yes
45.2	14	=	=	45.2	14	No
						Motives for drug use
59.4	19	=	=	59.4	19	The influence of friends
28.1	9	=	=	28.1	9	Love of experimentation and curiosity
18.8	6	=	=	18.8	6	Spending leisure time
12.5	4	=	=	12.5	4	Desire to increase productivity at work
15.6	5	=	=	15.6	5	Increasing sexual ability
9.4	3	=	=	9.4	3	Academic failure
9.4	3	=	=	9.4	3	Emotional failure
15.6	5	=	=	15.6	5	Reducing physical pain
31.3	10	=	=	31.3	10	Increasing activity in general
3.1	1	=	=	3.1	1	Other
						Suffering from chronic diseases
45.8	11	=	=	45.8	11	Suffering from mental disorders
12.5	3	=	=	12.5	3	Suffering from physical diseases
41.7	10	=	=	41.7	10	Not suffering from any disease
						The last time the drugged
36.7	11	=	=	36.7	11	Less than a week
40.0	12	=	=	40.0	12	From one week to one month
3.3	1	=	=	3.3	1	From a month to 3 months
13.3	4	=	=	13.3	4	From 3 months to 6 months

6.7	2	=	=	6.7	2	More than a year
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Among the sample of users, more than 62.5% belong to the age group of 31 and older, whereas nearly two-thirds of the sample of non-users belong to the age group of 23-30 years. Additionally, approximately half of the sample of users are unmarried, while more than 90% of the sample of non-users fall into the category of married. Furthermore, it is evident that 60% of the sample of users had an undergraduate level of education, whereas more than 90% of the sample of non-users had a graduate level of education.

Regarding occupational status, more than half of the sample of users are employed, whereas approximately 80% of the sample of non-users are unemployed. In terms of monthly expenditure, half of the sample of users spend between 1,000 and 3,000 Saudi riyals per month, whereas more than half of the sample of non-users fall within the same expenditure range. Moreover, more than 80% of the sample of users reside with their families, whereas nearly half of the sample of non-users also reside with their families.

It is worth noting that nearly 70% of the sample of users have no family history of drug user, while there is no family history of drug user in the non-user sample.

Furthermore, according to Table No. (1), it was found that nearly half of the sample of users had been exposed to addiction treatment. The most common motivations for using Shabu, as reported by the sample of users, were influenced by friends, increasing general activity, curiosity, and love of experimentation, spending leisure time, enhancing sexual ability, alleviating physical pain, desire to increase productivity at work, academic and emotional failures, and other reason. In addition, it was discovered that almost half of the sample of users suffer from mental disorders. Table No. (1) demonstrates that approximately one-third of the sample of users had consumed Shabu within a week before data collection.

Procedures

After selecting the research sample and to achieve the research objectives, a questionnaire was prepared, which included many measures to measure some of the socioeconomic, family climate, personality traits and psychological health characteristics. Table No. (2) refers to the statistical description of some of these measures used in this research.

Table 2: Descriptive Statistics for Research Measures.

Standardized Cronbach's Alpha	Standard deviation	Mean	Items reference	No. of Items	Variable
.832	2.63	12.87	Hernández-Serrano et al (2021)	8	Family climate
.820	4.26	20.52	(Derogatis, Lipman & Covi, 1973)	15	Abnormal family climate
.785	3.42	19.71	(Derogatis, Lipman & Covi, 1973)	13	Impulsiveness
.728	2.83	16.76	(Derogatis, Lipman & Covi, 1973)	13	Venturesomeness
.928	11.18	23.60	(Eysenck and Eysenck, 1978)	12	Somatization
.896	8.81	18.98	(Eysenck and Eysenck, 1978)	9	Interpersonal Sensibility
.915	11.75	26.03	(Eysenck and Eysenck, 1978)	13	Depression
.909	8.58	22.85	(Eysenck and Eysenck, 1978)	10	Anxiety

.830	5.57	12.30	(Eysenck and Eysenck, 1978)	6	Paranoid Ideation
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Statistical Methods and Techniques

After collecting the data, they were coded, organized, and entered a computer for analysis using the Statistical Package for Social Sciences (SPSS) version twenty-two. The following statistical methods and techniques were used in the analysis:

- Calculated the frequencies, percentages, arithmetic mean, mode, standard deviation, and standard score of the research variables based on their level of measurement.
- We assessed the reliability of the scales used in the research by calculating the Cronbach's alpha reliability coefficient for composite scales with binary choices using the Richardson-Kuder-20 (RK-20) equation and the standardized Cronbach's alpha coefficient for composite scales with multiple choices.
- Calculated the chi-square value to determine the relationship between subgroups in the research sample. Also, we calculated the Goodman and Kruskal's tau and Phi coefficients to determine the statistical power of this relationship if found.
- Calculated the point-biserial correlation coefficient to measure the relationship between the independent quantitative variables and the dependent variable.
- We used binary logistic regression to analyse the combined effect of independent variables on a dependent variable User/non-user.

Results and Discussion

Bivariate Relationships between Some Socioeconomic Characteristics and the Probability of Shabu Use/Non-Use

To determine the existence of a relationship between the subgroups of the study sample based on the characteristics of (Age; Social status; Level of education ; Working status; Monthly spending; Residential pattern and The family History of drug users) and the Shabu use/non-use; the value of Chi square was calculated, and the Goodman and Kruskal's tau and Phi association coefficient was calculated to test the statistical strength of these relationships, if any.

Table No. (3) shows the results of chi-square test for two independent samples, between age and Shabu user/non-user. The chi-square is equal to 27.176 for a significance level of 0.001, which indicates the existence of a relationship between the two variables. To determine the importance of this relationship, we calculated the Goodman and Kruskal's tau and phi coefficients, which are equal to 0.394 and 0.703; respectively, for a significance level of 0.001. According to Cohen's criterion (1988), there is therefore a moderate and strong significant relationship between age and Shabu user/non-user, respectively.

Table 3: Chi-Square Test Results for Two Independent Samples Between Age and Shabu User/Non-User.

		$\chi^2 (2, n = 72) = 27.176 ***$, Goodman and Kruskal's tau = 0.394 ***			Total
		Phi = 0.703 strong			
		Age			
		15-22	23-30	31 or more	
Shabu user/non- user	Non-user	Observed	9	22	31
		Expected	7.3	15.2	8.5
		% of total	16.4%	40.0%	0.0%
	User	Observed	4	5	15
		Expected	5.7	11.8	6.5
					24.0

		% of total	7.3%	9.1%	27.3%	43.6%
Total	Observed		13	27	15	55
	Expected		13.0	27.0	15.0	55.0
	% of total		23.6%	49.1%	27.3%	100.0%

*** $p < 0.001$.

As the results of table No (3) indicate that among the respondents who did not use Shabu 16.4%; 40.0% and 0.0% reported an age of 15-22; 23-30 and 31 or more, respectively. The percentages are reversed if we take into Observed the respondents who have used the Shabu (respectively 7.3%, 9.1%, 27.3% for the age categories of 15-22, 23-30 and 31 or more). Likewise, all respondents were distributed as follows according to the categories of age: 23.6% (15-22); 49.1% (23-30) and 27.3% (31 or more). These results confirm that age encourages respondents to use Shabu. These results are consistent with hypothesis No. H1, which had developed concerning the impact of age on the Shabu user/nonuser among youth.

Table No. (4) shows the results of the chi-square test for two independent samples (with Yates Continuity Correction), between social status and Shabu user/non-user. The chi-square is equal to 10.129 for a significance level of 0.001, indicating the existence of a relationship between the two variables. To determine the importance of this relationship, we calculated the Goodman and Kruskal's tau and phi coefficients which are equal to 0.182 and 0.427, respectively, for a significance level of 0.001. According to Cohen's criterion (1988) there is a weak and moderate significant relationship between social status and Shabu user/non-user respectively.

Table 4: Chi-Square Test Results for Two Independent Samples Between Social Status and Shabu User/Non-User.

		$\chi^2 (1, n = 72) = 10.129$ *** Goodman and Kruskal's tau = 0.182 *** low Phi = 0.427 *** moderate	Social Status		Total
			Unmarried	Married	
Shabu user/ non-user	Non-User	Observed	31	3	34
		Expected	24.7	9.3	34.0
		% of total	47.0%	4.5%	51.5%
	User	Observed	17	15	32
		Expected	23.3	8.7	32.0
		% of total	25.8%	22.7%	48.5%
	Total	Observed	48	18	66
		Expected	48.0	18.0	66.0
		% of total	72.7%	27.3%	100.0%

*** $p < 0.001$.

According to table No. (4), we note that, among the respondents who did not use Shabu, 47.0% and 4.5%, respectively, consider the social status "unmarried" and "married". Conversely, 25.8% and 22.7% of the respondents who used Shabu reported that the social status "unmarried" and "married". Finally, the entire surveyed sample judged the social status as follows: 72.7% for "unmarried" and 27.3% for "married". These results also confirm the influence of social status on the Shabu users/nonusers.

These results confirm that social status is associated with Shabu users/non-user. These results are consistent with hypothesis No. H1, which had been formulated concerning the impact of social status on the Shabu user/nonuser among youth.

Table No. (5) shows the results of the chi-square test for two independent samples (with Yates

Continuity Correction) to test the significance of the differences between the level of education and Shabu use/non-use.

The value of the chi-square is 16.683. It is considered significant because a significance level of 0.001 indicates a relationship between the two variables. To determine the strength of this relationship, Goodman and Kruskal's tau and phi coefficients were calculated. These values are 0.296 and 0.544, respectively, with a significance level of 0.001. According to Cohen's criterion (1988) there is therefore a weak and strong significant relationship between social status and Shabu user/non-user, respectively.

Table 5: Chi-Square Test Results for two Independent Samples Between Level of Education and Shabu User/Non-User.

		$\chi^2 (1, n = 72) = 16.683$ ***. Goodman and Kruskal's tau = 0.296 ***low Phi = 0.544*** strong	Level of education		Total
			Graduate	Undergraduate	
Shabu user/non-user	Non-User	Observed	31	3	34
		Expected	22.8	11.2	34.0
		% of total	48.4%	4.7%	53.1%
	User	Observed	12	18	30
		Expected	20.2	9.8	30.0
		% of total	18.8%	28.1%	46.9%
	Total	Observed	43	21	64
		Expected	43.0	21.0	64.0
		% of total	67.2%	32.8%	100.0%

*** $p < 0.001$.

According to table No. (5), noted that, among the respondents who did not use Shabu, 48.4% and 4.7% are respectively "graduate" and "undergraduate" with the level of their education, respectively. Conversely, 18.8% and 28.1% of those who used Shabu are respectively "graduate" and "undergraduate" with their level of education, respectively. Finally, the total number of respondents is distributed as follows: 67.2% for "graduate" and 32.8% for "undergraduate". These results are consistent with hypothesis No. H1, that had developed concerning the impact level of education on the Shabu user/non-user.

Table No. (6) shows the results of the chi-square test for two independent samples (with Yates Continuity Correction) to test the significance of the differences between the working status and Shabu use/non-use. The value of the chi-square is 2.539. It is considered a non-significant relationship between the two variables.

These results are not consistent with hypothesis No. H1, that had been formulated concerning the association relationship between of working status on the Shabu user/non-user.

Table 6: Chi-Square Test Results for Two Independent Samples Between Working Status and Shabu User/Non-User.

		$\chi^2 (1, n = 72) = 2.539$	Working status		Total
			Working	Not working	
Shabu user/non- user	Non-User	Observed	7	27	34
		Expected	10.5	23.5	34.0
		% of total	10.8%	41.5%	52.3%
	User	Observed	13	18	31

		Expected	9.5	21.5	31.0
		% of total	20.0%	27.7%	47.7%
	Total	Observed	20	45	65
		Expected	20.0	45.0	65.0
		% of total	30.8%	69.2%	100.0%

Table No. (7) shows the results of the chi-square test for two independent samples (with Yates Continuity Correction) to test the significance of the differences between monthly spending and Shabu use/non-use. The value of the chi-square is 0.342. It is considered a non-significant relationship between the two variables.

These results are not consistent with hypothesis No. H1, that had been formulated concerning the association relationship between monthly spending on the Shabu user/non-user.

Table 7: Chi-Square Test Results for Two Independent Samples Between Monthly Spending and Shabu User/Non-User.

			Monthly spending (The Saudi Riyal)		Total
			1000-3000	3500-9000	
$\chi^2 (1, n = 72) = 0.342$					
Shabu user/non-user	Non-User	Observed	22	14	36
		Expected	20.4	15.6	36.0
		% of total	36.7%	23.3%	60.0%
	User	Observed	12	12	24
		Expected	13.6	10.4	24.0
		% of total	20.0%	20.0%	40.0%
	Total	Observed	34	26	60
		Expected	34.0	26.0	60.0
		% of total	56.7%	43.3%	100.0%

Table No. (8) shows the results of the chi-square test for two independent samples (with Yates Continuity Correction) to test the significance of the differences between residential patterns and Shabu Use/Non-Use.

The value of the chi-square is 3.585. It is considered significant relationship at level of 0.05 that indicates a relationship between the two variables. To determine the strength of this relationship, Goodman and Kruskal's tau and phi coefficients were calculated. These values are 0.064 and 0.253, respectively, with a significance level of 0.05. According to Cohen's criterion (1988), there are therefore negligible and modest significant relationships between residential patterns and Shabu user/non-user, respectively.

Table 8: Chi-Square Test Results for Two Independent Samples Between Residential Patterns and Shabu user/non-user.

			Residential pattern		Total
			With the family	Alone	
$\chi^2 (1, n = 72) = 3.585$ Goodman and Kruskal's tau = 0.064 * very small Phi = - 0.253* modest					
Shabu user/non-user	Non-User	Observed	23	17	40
		Expected	27.2	12.8	40.0
		% of total	31.9%	23.6%	55.6%
	User	Observed	26	6	32
		Expected	21.8	10.2	32.0

		% of total	36.1%	8.3%	44.4%
		Observed	49	23	72
	Total	Expected	49.0	23.0	72.0
		% of total	68.1%	31.9%	100.0%

* $p < 0.05$

According to table No. (8), noted that, among the respondents who did not use Shabu, 31.9% and 23.6% are respectively "with the family" and "alone" as two types of residential type, respectively. Conversely, 36.1% and 8.3% of those who used Shabu are respectively "with the family" and "alone" as two types of residential type, respectively. Finally, the total number of respondents is distributed as follows: 68.1% for "with the family" and 31.9% for "alone". These results are consistent with hypothesis No. H1, that had developed concerning the impact of residential patterns on the Shabu user/non-user.

Table No. (9) shows the results of the chi-square test for two independent samples (with Yates Continuity Correction), between the family history of drug users and Shabu user/non-user. The chi-square is equal to 8.086 for a significance level of 0.01, indicating the existence of a relationship between the two variables. To determine the importance of this relationship, we calculated Goodman and Kruskal's tau and phi coefficients, which are equal to 0.142 and 0.372, respectively, for a significance level of 0.01. According to Cohen's criterion (1988), there is, therefore, a low and moderate significant relationship between the family history of drug users and Shabu user/non-user respectively.

Table 9: Chi-Square Test Results for two Independent Samples between Family History of Drug Users and Shabu User/Non-User.

		$\chi^2 (1, n = 72) = 8.086$ ** Goodman and Kruskal's tau = 0.142 ** Low Phi = - 0.378** moderate			
		Family history of drug users		Total	
		Yes	No		
user/non-	Non-User	Observed	1	39	40
		Expected	5.6	34.4	40.0
		% of total	1.4%	54.9%	56.3%
Shabu user	User	Observed	9	22	31
		Expected	4.4	26.6	31.0
		% of total	12.7%	31.0%	43.7%
Total	Observed	10	61	71	
	Expected	10.0	61.0	71.0	
	% of total	14.1%	85.9%	100.0%	

* $p < 0.05$ (2-tailed).

** $p < 0.01$ (2-tailed).

According to table No. (9), we note that, among the respondents who did not use Shabu, 1.4% and 54.9%, respectively, consider that family history of drug users "Yes" and "No". Conversely, 12.7% and 31.0% of the respondents who use Shabu reported that the family history of drug users "Yes" and "No". Finally, the entire surveyed sample judged family history of drug users as follows: 14.1% for "Yes" and 85.9% for "No". These results also confirm the influence of the family history of drug users on the Shabu user/nonuser.

These results confirm that family history of drug users associated with Shabu user/non-user. These results are consistent with the hypothesis No. H1, which had been formulated concerning the impact of family history of drug users on the Shabu user/nonuser.

Bivariate Correlations Between some Personality; Mental Health and Family Climate

Determinants, and the Probability of Shabu use/non-use

The point-biserial correlation coefficient was used to determine the binary relationships between the independent variables of the assumed variables and the Shabu user.

The results indicated in Table No. (10) that there is a positive and low to moderate correlation between the probability of Shabu use and the abnormal family climate; Impulsiveness; Somatization; Interpersonal Sensibility; Depression; Anxiety and Paranoid Ideation at a significant level of .05, as well as a positive and moderate correlation between the probability of Shabu use and abnormal family climate; Somatization; Interpersonal Sensibility; Depression and Anxiety; at a significant level of .01. These results do not support the validity of the statistical hypothesis, which assumes that there is no correlation between some determinants and the probability of Shabu use and partial acceptance of the research hypothesis No. H2.

Table 10: Results of the Point-Biserial Correlation Coefficient of some Determinants and the Shabu User/Non-User.

Independent variables	Point-biserial coefficients	Effect size+
Normal family climate	-.124	=
Abnormal family climate	.336**	moderate
Impulsiveness	.280*	Low to moderate
Venturesomeness	-.024	=
Somatization	.391**	moderate
Interpersonal Sensibility	.391**	moderate
Depression	.355**	moderate
Anxiety	.386**	moderate
Paranoid Ideation	.292*	Low to moderate

* $p < 0.05$ (2-tailed); ** $p < 0.01$ (2-tailed); (=) No Relationship; (+) according to (Cohen, 1988).

The results also indicated in Table No. (10), that there is no statistically significant relationship between the probability of Shabu use and the variables of normal family climate and Venturesomeness. This result partially supports the validity of the statistical hypothesis, which assumes that there is no significant relationship between the probability of Shabu use and some determinants.

Multivariate Relationships between Some Determinants and the Probability of Shabu Use/Non-Use

A binary logistic regression analysis was conducted to evaluate the probability of the effect of Impulsiveness and Venturesomeness as personality characteristics; mental health characteristic (Somatization; Interpersonal Sensibility; Depression; Anxiety and Paranoid Ideation) and normal and abnormal family climate variables on the Shabu user. The analysis included only the quantitative independent variables, which showed significant point-biserial correlation coefficients with the Shabu-user, excluding the other non-significant variables from the final logistic regression analysis.

Table 11: Results of logistic regression for the likelihood of Shabu use as a function of Abnormal family climate; Impulsiveness; Somatization; Interpersonal Sensibility; Depression; Anxiety and Paranoid Ideation.

	B	Wald χ^2	Sig.	Odds ratio	95% Confidence Interval for Odds Ratio	
					Lower	Upper
Abnormal family climate	.005	.002	.963	1.005	.816	1.237

Impulsiveness	.142	1.040	.308	1.153	.877	1.516
Somatization	.086	2.058	.151	1.090	.969	1.226
Interpersonal Sensibility	.053	.309	.578	1.054	.875	1.271
Depression	-.025	.062	.803	.976	.804	1.184
Anxiety	.020	.031	.861	1.020	.817	1.273
Paranoid Ideation	-.027	.078	.780	.973	.802	1.180
Constant	-6.079	3.711	.054	.002		

The results of the abnormal family climate; personality and mental health characteristics model in table No. (11) indicated that the value of Chi- square using the Omnibus Tests of Model Coefficients test was 14.855 (with 7 degrees of freedom, and a sample size of 72), which is a significant value at the probability level of .05, which indicates the quality of the model and its ability to distinguish between the answers of the respondents who have the Shabu use; and the respondents who have the Shabu non-use.

The value of Chi-square using the Hosmer and Lemeshow Test was 4.369 (with 8 degrees of freedom, and a sample size of 72), which is a non-significant value (.822) as well as a value greater than .05, which also indicates the quality of the model and its ability to distinguish between the answers of the respondents.

The results also indicate that the model explains between 39.9% according to the Nagelkerke R squared test of the discrepancy the Shabu user/non-user. The results also indicated that the sensitivity of the model reached 68.8% of the accuracy for individuals who are using shabu; while the specificity of the model reached 92.6% of the non-use shabu and correctly identified individuals. At the level of the model, the ability of the model to classify cases correctly was 83.7%.

The results also indicated in Table No. (11) that Wald's test values for the chi-square test for seven variables had not a unique impact in the model, which not contribute to explaining the variation in the model, at probability level of 0.05.

The results also indicated in Table No. (11) that the relationship trend to the value of the partial regression coefficient B; that the variables of Abnormal family climate; Impulsiveness; Somatization; Interpersonal Sensibility and Anxiety have a positive trend; which indicates that larger youth using shabu in terms of Abnormal family climate; Impulsiveness; Somatization; Interpersonal Sensibility and Anxiety are more likely to choose the shabu use answer.

The relationship trend for the value of the partial regression coefficient B for each of the variables of depression and paranoid ideation are negative, which indicates that each increase in the degree of any of these variables by the unit will reduce the likelihood of youth using shabu.

The results also indicated in Table No. (11) that there are no powerful and influential variables in the model. These results do not support the validity of the statistical hypothesis, which makes it possible to accept the H3 research hypothesis.

Recommendations

- Preparing educational programs through all audio and visual media to raise awareness of the problems resulting from drug abuse.
- Conducting an epidemiological survey of the phenomenon of drug abuse that provides

- accurate statistics about the spread of the phenomenon
- Reducing the showing of films that contain scenes of drug use.
 - Parents' attention to the psychological factors in children that contribute significantly to drug abuse
 - Open hospitals for treatment of users of psychological substances (alcohol and drugs)
 - Family's participation of their children in choosing friends.
 - Giving the family Their children love and family stability

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