Dependence Severity, Locus of Control, and Readiness to Change in Male Alcoholic Clients: A Correlational Study

شدة الاعتماد ومركز التحكم والاستعداد للتغيير لدى المرضى الذكور المدمنين على الكحول: دراسة ارتباطية

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المستخلص

الهدف: لتقييم مستوى شدة الاعتماد، ومركز التحكم، والاستعداد للتغيير لدى ذكور المدمنين الكحول وقياس العلاقة بين الاعتماد مع موقع السيطرة والاستعداد للتغيير.

المنهجية: تصميم وصفي ارتباطي تم إجراؤه في مراكز إعادة التأهيل من تعاطي المواد المخدرة في المستشفيات التعليمية للأمراض النفسية في مدينة بغداد من فترة تشرين الثاني 2021 الى ا يار 2022. أداة الدراسة صممت باستخدام الخصائص الاجتماعية والديموغرافية، والخصائص السريرية للمرضى، الاستبيان قصير الشكل الخاص ببيانات الاعتماد على الكحول ومركز التحكم الداخلي والخارجي المتعلق بالشرب، ومراحل الاستعداد للتغيير ومقياس الرغبة للمعالجة. تم جمع البيانات من خلال استخدام نموذج المقابلة شبة المنظم وتحليلها بأستخدام الحزمة الاحصائية للعلوم الاجتماعية، الأصدار٢٦.٠.

النتائج: كان مستوى شدة الاعتماد على الكحول متوسطًا، ومستوى متوسط إلى مرتفع من موضع التحكم والاستعداد للتغيير. علاقة مهمة بين شدة الاعتماد مع مركز التحكم الداخلي والخارجي عند قيمة p = .001، وعلاقة عكسية مهمة بين الاستعداد للتغيير بين المرضى فيما يتعلق بمدة استخدام الكحول عند القيمة p = .008، ومقدار تعاطي الكحول يوميًا بقيمة p = .009. تعتبر العلاقة المهمة بين الاستعداد للتغيير ومستوى تعليم للمرضى، وعمر المرضى المدمنين على الكحوليات مهمة عند قيمة p = 0.005. أخيرًا، هناك علاقة ذات دلالة إحصائية بين مركز السيطرة والدخل الشهري.

الاستنتاجات: وجدت نتائج الدراسة الحالية ان المرضى الذين يعتمدون على الكحول بشكل كبير يقرون بأن لديهم مشاكل تتعلق بالشرب ومن المرجح أن يحتاجون الى المساعدة لمنع تفاقمه. كما ان المرضى الذين يعتمدون على الكحول بشكل كبير قد نسبوا الشرب بشكل اساسي الى عوامل خارجية..

التوصيات: اجراء المزيد من البحوث حول سوء استخدام الكحول، وتفعيل دور وسائل الاعلام لزيادة وعي المجتمع حول مضار الكحول وطرق العلاج الممكنه.

الكلمات المفتاحية: شدة الاعتماد، مركز التحكم، والاستعداد للتغيير.

Abstract

Objectives: To evaluate the level of dependence severity, locus of control, and readiness to change in males alcoholic clients and measure the correlation between their dependence and locus of control and readiness to change.

Methodology: A descriptive correlational design was conducted in the substance use rehabilitation centres at psychiatric teaching hospitals in Baghdad city from November /2021 to May 2022. The instrument of the study was designed by using sociodemographic, the clinical characteristics of the clients, the Short-form Alcohol Dependence Data Questionnaire (SADD), Drinking Related Internal-External Locus of Control Scale: (DRIE), and the Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES). The data was collected through the use of semi-structure form and analysed by Social Package for Statistical Sciences SPSS version 26.

Results: Alcohol dependence severity level was moderate, and moderate to high level of locus of control and readiness to change. A significant relationship among dependence severity with an internal and external locus of control at p-value= .001, a significant reverse relationship between readiness to change among clients with regard to the duration of alcohol use at p-value= .008, and amount of alcohol use per day at p-value=.009. A statistically significant relationship between readiness to change and clients' level of education, and age of alcoholic clients at p-value= .005. Finally, there is a significant relationship between locus of control and monthly income.

Conclusions: The results of the current study found that clients with significant alcohol dependence report that they have problems related to their drinking and are more likely to need help to prevent it from getting worse. Clients who depend heavily on alcohol have attributed drinking primarily to external factors.

Recommendations: Further researches need be conducted on AUD, activating the media's role to increase community awareness about harmful effects of alcohol and the possible treatment methods.

Key words: dependence severity, locus of control, readiness to change.

Introduction

Worldwide, Alcohol is the most generally abused substances, alcohol available in most cultures and is often involved in important events and religious rituals. In Americans society, approximately 8.5 percent over 18 years old have an alcohol use disorder [1].

According to the statistical manual issued by the Iraqi Ministry of Health and Environment for 2020, the male number of inpatients and outpatients in Iraqi hospitals for the purpose of alcohol addiction treatments reached 291 and 2,990 patients respectively [2].

Alcohol dependence is a chronic disorder, with a course of deteriorating and remitting like other chronic diseases, as diabetes and hypertension. The main challenge in the management of alcoholism is the avoidance of relapse to heavy drinking. 10th revision of the International Classification of Diseases and Health Problems (ICD-10) describes the dependence disorder as being a group of mental and behavioral a phenomenon in which the use of a substance is much higher priority for a particular person than other actions that were previously prioritized [3].

Alcohol use disorders (AUDs) are one of the most common mental illnesses. Alcohol use disorders were among the top five major reasons for disability-adjusted life years15–44 age groups (DALYs). According to the most recent global data, harmful alcohol use caused 3 million deaths worldwide, with the illness burden being higher in low- and middle-income countries (LMICs) [4].

Locus of control can be used to explain behavior in terms of internal (individual responsibility) or external (external causes such as significant others or chance) factors. Gender differences in the locus of control of alcoholism have produced conflicting results in previous studies. To determine the reality of gender-based locus of control, researchers need to look at gender and locus of control in the context of alcoholism [5].

The disease model of addiction is characterized by a loss of control, Treatment groups' theory claims that "alcoholics" lack self-control and hence lack the ability to choose whether or not to take alcohol. This loss of control is seen as a personal choice and thus an internal one. This creates a significant issue in the field of alcoholism [6].

Motivation to change is a broad notion that encompasses many different facets of the process of changing one's behavior. The Trans-Theoretical Model (TTM) of change posits that change occurs in a succession of stages. It has a broader scope than the phase's idea and often signifies a readiness or openness to participate in a specific process or adopt a specific behavior. Some have described it as a combination of the patients' perception of the problem's importance and their belief in their ability to change [7].

Methodology

Design

A descriptive correlational design was used to achieve the objectives of the current study.

Setting

The study was conducted in the substance use rehabilitation centers at Ibn-Rushed Psychiatric Teaching Hospital and Baghdad Teaching Hospital, data collection was gathered for the period from January 1st to February 28th after obtaining official permission from the hospitals from which samples are collected.

Ethical Consideration

The Scientific Research Ethical Committee at the College of Nursing University of Baghdad has given the study formal ethical approval. All subjects have signed an informed consent form indicating their agreement to take part in the research.

Sample

A non-probability, purposive sample of (70) clients with AUDs was selected for the purpose of the study, according to the following inclusion and exclusion criteria:

1. Inclusion criteria which include clients that diagnosed with AUDs; admitted to the hospital and agree to participate in the study, don't have any other psychiatric disorders. le

2. Exclusion criteria, clients with sever withdrawal symptoms; and those didn't answer the questionnaire completely.

Short form alcohol dependence data questionnaire (SADD) designed by the Davidson and Raistrick to assess alcohol dependence in the general adult substance-abusing population [8], these are assessed by Never=1 Sometimes=2 Often=3 nearly always=4.

Drinking Related Internal-External Locus of Control Scale (DRIE) designed by Donovan and O'Leary[9], used to assess the individual's perception of personal control related to alcohol, drinking behavior, and recovery, Number of items: 25 pairs of alternatives that refer to internal and external locus of control. The Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES) is a 19-item designed by – Miller and Rollnick, self-administered instrument designed to assess client motivation to change drinking-related behavior [10]. These were assessed as strongly disagree=1, disagree=2, undecided=3, agree=4 and strongly agree=5.

Pilot study

Face and content validity has been determined throughout the use of a panel of experts (10) they are: experts' members from the College of Nursing University of Baghdad, Babylon, and Kufa. specialists in psychiatry from Teaching Hospitals; experts are faculty members from the Medical Technical Institute/Baghdad.

Cronbach's Alpha was used to measure the questionnaire's reliability that were 0.88, 0.80, 0.78 respectively. Data was collected for pilot study during the period from December 12th January to 1st, 2022.

Data Collection Methods

A self-administered questionnaire was used with the structured interview for the data collection process.

Data Analysis Method

Descriptive data analysis method was used for the data analysis of the study results which includes frequencies and percentages, and inferential data analysis methods which include Cronbach Alpha (α) to estimate the internal consistency of the study instrument, and Linear Regression and Spearman correlation.

Results

Table (1): Distribution of the Study Sample According to their Socio-demographic

   Characteristics

List	Characteristics		F	%
1	Age M±SD= 35.39±9.406	>19 year	6	8.6
		20 – 29 year	11	15.7
		30 – 39 year	28	40
		40 – 49 year	19	27.1
		50 < year	6	8.6
		Total	*70*	*100*
2	Residency	Urban	65	92.9
		Rural	5	7.1
		Total	*70*	*100*
3	Marital status	Unmarried	22	31.4
		Married	40	57.2
		Divorced	4	5.7
		Separated	4	5.7
		Total	*70*	*100*
4	Level of education	Primary school	29	41.4
		Intermediate school	17	24.3
		Secondary school	8	11.4
		Diploma	7	10
		Bachelor	7	10
		Postgraduate	2	2.9
		Total	*70*	*100*
5	Occupation	Doesn't work	13	18.6

		Free works	24	34.3
		Employee	33	47.1
		Total	*70*	*100*
6	Monthly income	Insufficient	16	22.9
		Barely sufficient	25	35.7
		Sufficient	29	41.4
		Total	*70*	*100*

f: Frequency, %: Percentage, M: Mean, SD: Standard deviation

This table shows that alcoholic clients are with average age of 35.39±9.406 years, in which the highest percentage is seen with age group 30-39 years, most of clients are resident in urban areas (92.9%), 57.2% of clients are married, the highest percentage refers those clients are graduated from primary school (41.4%), 47.1% of clients are working as governmental employees while 34.3% are working free works, 41.4% of clients are perceived sufficient monthly income.

Table (2): Distribution of Sample According to their Clinical Characteristics

List		Characteristics	F	%
1	Duration of alcohol use M±SD= 11.97±7.311	1 – 5 years	17	24.3
		6 – 10 year	19	27.1
		11 – 15 year	17	24.3
		16 – 20 year	11	15.7
		21 < year	6	8.6
		Total	*70*	*100*
2	Amount of alcohol	≤ 500 ml per day	20	28.6
		600 – 1000 ml per day	17	24.3
		1000 < ml per day	33	47.1
		Total	*70*	*100*
3	Types of alcohol	Beer	5	7.1
		Whisky	20	28.6

		Wine	15	21.4
		More than one type	30	42.9
		Total	*70*	*100*
4	Types of admission	Voluntary	68	97.1
		Involuntary	2	2.9
		Total	*70*	*100*
5	Number of admission	1	46	65.7
		2	13	18.6
		3	7	10
		4+	4	5.7
		Total	*70*	*100*

f: Frequency, %: Percentage, M: Mean, SD: Standard deviation, ml: Milliliter

This table shows that average duration of alcohol use is 11.97±7.311 years in which 27.1% is reported 6-10 years on alcohol use and 24.3% is seen among those with 1-5 years and 11-15 years duration of alcohol use, (47.1%) of clients are consumed more than one liter per day of alcohol of more than one type (42.9%) and 97.1% of alcoholic admitted to hospital spontaneously (voluntary admission) for the first-time admission (65.7%).

Table (3): Assessment of Alcohol Dependence Severity among Alcoholic Clients

Dependence severity	F	%	M	SD
Low	16	22.9		
Moderate	38	54.2	37.69	9.918
High	16	22.9		
Total	*70*	*100*		

f: Frequency, %: Percentage, M: Mean for total score, SD: Standard Deviation for total score: Low= 15 – 30, Moderate= 30.1 – 45, High= 45.1 – 60

This table indicates that alcoholic clients are associated with moderate dependency on alcohol (M±SD= 37.69±9.918) in which more than half of them (54.2%) show moderate level of dependence severity.

Table (4): Assessment of Locus of Control among Alcoholic Clients

Locus of control	Internal		External	
	F	%	F	%
Low	20	28.6	7	10
Moderate	43	61.4	43	61.4
High	7	10	20	28.6
Total	*70*	*100*	*70*	*100*
Mean ± SD	*11.23 ± 4.572*		*13.79 ± 4.549*	

f: Frequency, %: Percentage, SD: Standard Deviation: Low= 0 – 8.33, Moderate= 8.34 – 16.67, High= 16.68 – 25

This table indicates alcoholic clients show low to moderate internal locus of control (M±SD= 11.23±4.572) in which 61.4% of them show moderate level and 28.6% show low level while they show moderate to high external locus of control (M±SD= 13.79±4.549) in which 61.4% show moderate level and 28.6% show high level.

Table (5): Assessment of Readiness to Change among Alcoholic Clients

Readiness to change	F	%	M	SD
Low	2	2.8		
Moderate	30	47.2	66.94	11.977
High	35	50		
Total	*70*	*100*		

f: Frequency, %: Percentage M: Mean for total score, SD: Standard Deviation for total score: Low= 19 – 44.33, Moderate= 44.34 – 69.67, High= 69.68 – 95

This table indicates that alcoholic clients show moderate to high readiness to change (M±SD= 66.94±11.977) in which 50% of them show high level and 47.2% show moderate level.

Table (6): Regression Analysis for Dependence Severity with Locus of Control and Readiness to Change among Alcoholic Clients (N=70)

Dependence severity / Variable	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Internal locus of control	-.233	.048	-.505	-4.824	.001
External locus of control	.233	.048	.508	4.859	.001
Readiness to change	.240	.144	.198	1.669	.100

a. Dependent variable: Locus of control and readiness to change

This table reveals that there is high significant difference among dependence severity with internal and external locus of control at p-value= .001.

Table (7): Correlation among Locus of control and Readiness to Change among Alcoholic Clients with their Age   (N=70)

Age / Variables	Spearman Correlation	P-value (2-tailed)	Significance
Internal locus of control	-.103	.395	N.S
External locus of control	.103	.398	N.S
Readiness to change	.330	.005	H.S

H.S: High significant, S: Significant, N.S.: Not significant

This table indicates that there is high significant relationship between readiness to change and clients' age at p-value= .005.

Table (8): Correlation among Locus of control and Readiness to Change among Alcoholic Clients with their Level of Education   (N=70)

Variables \ Education	Spearman Correlation	P-value (2-tailed)	Significance
Internal locus of control	.062	.612	N.S
External locus of control	-.058	.631	N.S
Readiness to change	.264	.027	S

H.S: High significant, S: Significant, N.S.: Not significant

This table reveals that there is significant relationship readiness to change and clients' level of education at p-value= 264.

Table (9): Correlation among Locus of control and Readiness to Change among Alcoholic Clients with their Monthly Income   (N=70)

Variables \ Income	Spearman Correlation	P-value (2-tailed)	Significance
Internal locus of control	.428	.001	H.S
External locus of control	.427	.001	H.S
Readiness to change	.141	.246	N.S

H.S: High significant, S: Significant, N.S.: Not significant

This table shows that there is high significant relationship locus of control (internal and external) with regard to clients perceived monthly income at p-value= .001.

Table (10): Correlation among Locus of control and Readiness to Change among Alcoholic Clients with Duration of Alcohol Use   (N=70)

Duration / Variables	Spearman Correlation	P-value (2-tailed)	Significance
Internal locus of control	-.091	.452	N.S
External locus of control	.088	.467	N.S
Readiness to change	-.313	.008	S

H.S: High significant, S: Significant, N.S.: Not significant

This table reveals a significant reverse relationship between readiness to change among clients with regard to duration of alcohol use at p-value= .008.

Table (11): Correlation among Locus of Control and Readiness to Change Among Alcoholic Clients with Amount of Alcohol Use   (N=70)

Amount / Variables	Spearman Correlation	P-value (2-tailed)	Significance
Internal locus of control	-.100	.411	N.S
External locus of control	.100	.412	N.S
Readiness to change	-.310	.009	S

H.S: High significant, S: Significant, N.S.: Not significant

This table indicates that there is significant reverse relationship readiness to change among clients with regard to amount of alcohol use at p-value= .009

Discussion
Part 1: Discussion of Socio-demographic Characteristics

Table (1) presented 40% of the study sample was at the age group (30-39 year). A study conducted in Iraq showed that the highest age group is (20-29) years old at 48.8% of the 80 clients [11]. In relation to residency the study showed that 92.9% were living in urban area. The marital status showed that 57.2% of clients are married. A study in India showed that 88.9% of study sample were married [12]. Relating to level of education, the highest percentage refers that clients are graduated from primary school (41.4%) and intermediate school (24.3%). The occupational status refers that 47.1% of clients are working as governmental employees. Regarding monthly income, 41.4% of clients are perceived sufficient

monthly income. A study in Iraq by Mohammed, Q, revealed that high percent of monthly income is barely sufficient that consist 56.3% of study sample [11].

Part 2: Discussion of Clinical Characteristics of alcoholic male clients

Table (2) represent that alcoholic clients with average duration more than 10 years at (M±SD= 11.97±7.311) consist about 27.1% that duration (6-10 years and (24.3%) that within duration of use (11-15 years), the percent of clients that consume more than of one litter daily (47.1%) of multiple types of alcohol (42.9%) and the second high percentage is of whisky drinking (28.6%), but majority of them were voluntary admitted to the hospitals(97.1), and for first time visit (65.7%) to seeking help or treatment of alcohol use disorder . A study conducted by Bhowmick et al. (2019) showed that the majority of the study sample were admitted to first time 77.8% and they started alcohol use at age of 21years old and more[8]. Nisheet reported that the severity of alcohol use is affected by the duration of alcohol drinking, which means if the duration of alcohol consumption increased the severity increased also, and this study explain that as the number of attempts to quite alcohol increase severity of alcohol use was higher [13].

Part 3: Discussion of the Level of Alcohol Dependence Severity, Locus of Control and Readiness to Change among Alcoholic Clients

Alcohol dependence severity level of clients with alcohol use disorder were a moderate as indicated by (M±SD= 37.69±9.918) in which (%=54.2, n=38) of clients showed a moderate dependency, that is presented in table (3).

A study in India find that more than half of study sample had a moderate level of alcohol dependence (51.90%), and (22.20%) had high alcohol dependence while (25.90%) with low alcohol dependence [12].

With regard to internal and external locus of control, the table (4) showed that the clients have moderate to high external locus of control in which 61.4% show moderate level and 28.6% show high level, while internal locus of control show low to moderate level in which 61.4% of them show moderate level and 28.6% show low.

A study in India showed that the severity of alcohol is affected by the level of internal and external locus of control, as the dependence low the internal locus of control is the dominant, the moderate and high alcohol dependence indicate that the external locus of control is the ruling of the individual thinking and behaviors [12].

The study sample demonstrated that 50% (n=35) had a high level of readiness to change, and 47.2% show a moderate level at (M±SD= 66.94±11.977) table (5).

A study in France found that the mean score of readiness to change is significantly high because the patients was in alcohol treatment entry [14].

Part 4: Discussion of Regression Analysis for Dependence Severity with Locus of Control and Readiness to Change among Alcoholic Clients

Table (4-10) revealed that there is high significant difference among dependence severity with internal and external locus of control at p-value= .001. Bhowmick et al. (2019) conducted a study in India found that low alcohol dependent patients have an internal locus of control, while moderate and sever dependent patients have more external locus of control [12].

Part 5: Discussion of Correlation among Locus of control and socio-Demographic Variable

The result shows no significant relationship among locus of control (internal and external) with regard to age, residency,

education, marital status, occupation, duration, amount of alcohol use, except that in table (9) which show a significant relationship between locus of control (internal and external) and the monthly income at p-value.001, Which indicate that highly locus of control (internal and external) is affected by monthly income of alcoholic client. That means if the clients have high external locus of control that will worsen the state because the client with high locus of control is strongly increase alcohol intake and give justifications that as result of environmental and social factors, inconsistent with client who have highly internal locus of control relation with monthly income which leads to be more compliant to the treatment program and more reducing the risk of relapse. And the role of poverty in escaping to the drunk to avoid the stress causing reality.

Part 6: Discussion of Correlation among readiness to change and socio-demographic variables

There were a significant relationship between readiness to change and (age, level of education, duration of alcohol use, and the amount of alcohol drinking daily). As showed in table (7) the relationship between readiness to change and ages of alcoholic clients' is significant at p-value= .005.

A study showed that there was no significant relationship between the readiness to change and clients' age[11].

In table (8). Table (9) it revealed a significant relationship between readiness to change and clients' level of education. This study imply that the level of education is playing a role in how the clients is ready to begin behavior change and get treatment, and in reduce level of alcohol taking because the low level of education is leading to increase alcohol intake [15].

Due to originality of the present study, unfortunately, supportive evidence is

not available in the literature. But high education level is related to increased level of readiness to change in alcoholic clients. Table (10) revealed a significant reverse relationship between readiness to change among clients with regard to duration of alcohol use at p-value= .008, that indicate the negative correlation between the duration of alcohol use and the readiness to change. Which explain the readiness to change is low when the clients' duration of alcohol use in long time period, and become high if the period of alcohol use is short time. Due to originality of the present study, unfortunately, supportive evidence is not available in the literature. Table (11) indicated that there is significant reverse relationship readiness to change among clients with regard to amount of alcohol use at p-value= .009, that refer to the negative correlation between readiness to change and amount of alcohol use. Increased the amount of alcohol used, the readiness to change in alcoholic clients decreased and become more difficult to change their behavior of drinking, and get treatment. Due to the originality of the present study, unfortunately, supportive evidences are not available in the literature.

Conclusions

The results of the current study found that clients with significant alcohol dependence report that they have problems related to their drinking and are more likely to need help to prevent it from getting worse. Clients who depend heavily on alcohol have attributed drinking primarily to external factors. Furthermore, the internal and external locus of control have a significant relationship with the monthly income of alcoholics, and there is a relationship between clients' age, level of education and readiness to change.

Recommendations

1. Further researches need to focus on the roles of LoC in recognition of alcoholic problem and predict treatment outcome.
2. Governmental institutions need to activate the media role to increase community awareness about AUDs.
3. Ministry of health focus on the effectiveness of alcoholic support groups and prepare realistic guide for treatment by focusing on shifting external LoC to internal LoC that facilitate change in behavior.

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