Original Article

Investigating the Relationship between Chronic Disease and Substance Use Severity in Elderly People Referred to Addiction Treatment Clinics

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Abstract

Substance abuse, especially opiates and medicines prescribed by physicians, is rapidly spreading among elderly people. The objective of this study was to investigate the relationship between the type of chronic disease and the severity of substance use in elderly people referred to addiction treatment clinics. This study is a correlational type of descriptive-analytical study. The statistical population of this study consisted of all elderly substance users referred to addiction treatment centers in Amol in the first quarter of 2016. In this study, considering 10 people for each variable, a total of 200 elderly people (10 × 20 = 200) were selected through multistage cluster sampling. Data collection tools included library methods (books, articles, and theses) and a standardized questionnaire. The data were analyzed through SPSS version 21 software. Since the variables of chronic disease and type of chronic disease were significantly associated with substance abuse, paying attention to demographic-medical characteristics of the elderly people and designing appropriate interventions seems to be necessary, when planning to improve the provision of healthcare services.

Keywords: Chronic Disease Type, Substance Use, Elderly, Addiction Treatment

Introduction

Substance abuse is one of the major problems of human communities, which has great importance from the medical, physical and mental health, and social, cultural, economic and political perspectives. It causes numerous social risks and deaths annually around the world [1]. Due to certain conditions of elderly people, different types of mental distresses, distrust, and aggression are manifested in them and a kind of behavior associated with a high concern on their health is created in them. As a result, they show a tendency to use a substance to alleviate the mentioned symptoms. The World Health Organization (WHO) defines addiction as acute toxicity or an illness that is harmful to the individual and society and is caused by natural or industrial substance use [2]. Increasing age is not a disease, but it increases the risk of disease as a result of the physiological changes that occur [3]. Changing the epidemiological pattern of diseases in elderly people causes an increase in the prevalence of chronic diseases [4]. Chronic diseases are long-term conditions that are often progressive and can be controlled with continuous care and behavior change [5]. At the present time, it is estimated that 80% of people over the age of 65 years to have one chronic disease and 50% to have two chronic diseases [6]. Chronic disease is hardly cured and its treatment is a long process and in some cases, it is incurable and there is no definite cure for. The most important chronic physical diseases that can cause mental disorders include cancer, cardiovascular disease, gastrointestinal diseases (gastric ulcers, intestinal colitis, and gastritis), thyroid disorders, pulmonary disorders, asthma and allergies, thalassemia, AIDS (acquired immune deficiency syndrome), diabetes, leprosy, epilepsy, chronic kidney failure (dialysis, kidney stone disorder), chronic bone and joint diseases (arthritis and rheumatism), and physical disabilities (such as blindness, deafness, infertility, joint paralysis due to spinal cord injury,

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diseases, stroke, and events such as burns leading to amputation and face and body deformation) [7].

In a descriptive-analytical study, which conducted to evaluate the prevalence of chronic diseases in elderly people in Ilam city, Peyman et al (2011) selected 121 elderly people using cluster random sampling. Results showed that more than half of women (56.1%) and men (46.2%) were overweight or obese. According to physician diagnosis, the prevalence of cardiovascular disease, hypertension, and diabetes was 53%, 36.8% and 17.4%, respectively [8]. In his research entitled "Frequency of chronic diseases and some characteristics of aging associated with disability in elderly people covered by Imam Khomeini Relief Committee and the factors affecting it, Tutunchi (2004) selected 193 men (30%) and 452 women (70%). The results showed that the prevalence of chronic disease was significantly associated with age and marital status. However, there was no statistically significant relationship between elderly people's characteristics and disability and aging characteristics. There was also no significant relationship between the prevalence of chronic diseases and gender, literacy, job status, and smoking [9]. Given the role of nurses in promoting health and disease prevention and as identifying predictors of substance abuse can be useful in designing and prioritizing interventions, the present study was conducted to investigate the relationship between the type of chronic disease and severity of substance use in elderly people referred to addiction treatment clinics.

Methodology

The present study is a correlational type of descriptive-analytical study.

Statistical population

The statistical population of this study consisted of all elderly substance users referred to addiction treatment centers in Amol in the first quarter of 2017.

Statistical Sample, Size and Sampling Method

The samples were selected from the statistical population based on the characteristics of the samples. The study samples included 200 people (10 × 20 = 200) considering 10 people for each variable. The elderly people were selected through multistage cluster sampling.

Data collection tools

In this study, the library method (books, articles, and theses) and standardized questionnaires were used to collect the data.

Procedure

After obtaining permission to conduct the research and obtaining a letter of introduction from the university, the researcher prepared a list and address of addiction treatment clinics and selected two clinics from each of the north, south, east, west, and centers of Amol by drawing. A convenience sampling was used in each center. Due to the lack of access to the target sample size, the drawing procedure was repeated in 5 districts. Explaining the goals and the way of conducting the study, the researcher identified eligible elderly people and after obtaining written informed consent from these patients, the researcher ensured them that their information would remain confidential and the results would not be provided to any other person or organization without their consent. Since most of the samples were illiterate or had a low level of education, the researcher used the interview method to complete the questionnaires.

Inclusion and exclusion criteria

The inclusion criteria of the study included having an age of over 60 years and the ability to answer questions and exclusion criteria included unwillingness to cooperate in the study.

Data analysis methods

In this study, the correlation test was used in SPSS software.

Results

Table 1 shows the frequency distribution of the chronic disease type in elderly people referred to addiction treatment clinics. According to the data in this table, the majority of elderly people had hypertension (55.5%) and cardiovascular disease (57%).

Table 1: Frequency distribution of chronic disease type in elderly people referred to Amol Addiction Clinics (2017)

Chronic diseases	N		%		Total	
	Yes	No	Yes	No	N	%
Hypertension	111	89	5.55	5.44	200	100
Cardiovascular disease	114	86	57	43	200	100
Gastrointestinal Disease	68	132	34	66	200	100
Diabetes	67	133	5.33	5.66	200	100
Arthritis	65	135	5.32	5.67	200	100
Chronic lung disease	64	136	32	68	200	100
kidney disease	63	137	5.31	5.68	200	100
Liver disease	51	149	5.25	5.74	200	100
Stroke and limb paralysis	31	169	5.15	5.84	200	100
Cancer	21	179	5.10	5.89	200	100

Table 2 compares the mean severity of substance use with regard to diabetes and hypertension in elderly people referred to Amol Addiction Clinics (2017). Table 2 shows that there is no significant relationship between diabetes and the severity of substance use. There was also a statistically significant relationship between hypertension and the severity of tobacco use (P = 0.012).

Table 2: Comparison of the mean severity of substance use with regard to diabetes and hypertension in elderly people referred to Amol Addiction Clinics (2017)

Disease	The severity of substance use	Disease	N	Mean	SD	t	P-Value
Diabetes	Tobacco products	Yes	43	16.18	92.3	363.0	717.0
		No	87	86.17	67.4		
	Alcoholic drinks	Yes	16	75.14	13.7	705.0	483.0
		No	46	32.16	87.7		
	Cannabis	Yes	10	5	39.4	975.0	336.0
		No	31	48.7	61.7		
	Inhaling	Yes	8	62.3	18.1	687.0	499.0
		No	17	5	54.5		
	Sedative and soporific substances	Yes	27	18.13	43.6	39.1	169.0
		No	26	11.16	72.8		
	Opium-like substances	Yes	67	14.17	24.4	33.1	183.0
		No	133	07.18	80.4		
Hypertension	Tobacco products	Yes	76	77.18	36.4	54.2	012.0
		No	54	81.16	28.4		
	Alcoholic drinks	Yes	29	96.15	38.8	04.0	96.0
		No	33	87.15	10.7		
	Cannabis	Yes	25	44.7	36.7	63.0	52.0
		No	16	6	6/52		
	Inhaling	Yes	15	93.4	92.5	48.0	63.0
		No	10	4	33.1		
	Sedative and soporific substances	Yes	27	03.15	10.9	39.0	69.0
		No	26	19.14	09.6		
	Opium-like substances	Yes	111	78.17	61.4	06.0	94.0
		No	89	74.17	68.4		

Table 3 compares the severity of substance use with regard to arthritis, chronic lung disease, gastrointestinal disease, and kidney disease in elderly people referred to Amol Addiction Clinics in 2017. Table 3 shows that there is no significant relationship between arthritis and chronic lung and severity of substance use. There was a significant relationship between gastrointestinal disease and the severity of alcohol consumption (P = 0.03). Also, alcohol consumption was higher in the subjects without kidney disease (P = 0.008).

Table 3: Comparison of the mean severity of substance use according to arthritis, chronic lung disease, gastrointestinal disease and kidney disease in elderly people referred to Amol Addiction Clinics in 2017

Disease	Severity of substance use	Disease	N	Mean	SD	F	sig	T	Sig 2-tailed
Arthritis	Tobacco products	Yes	42	71.17	77.4	19.0	66.0	43.0	66.0
		No	88	07.18	26.4				
	Alcoholic drinks	Yes	16	15	65.7	05.0	81.0	55.0	58.0
		No	46	23.16	72.7				
	Cannabis	Yes	12	83.5	85.4	46.1	23.0	61.0	54.0
		No	29	31.7	75.7				
	Inhaling	Yes	8	87.3	24.1	11.1	3.0	50.0	62.0
		No	17	88.4	56.5				
	Sedative and soporific substances	Yes	26	46.13	55.7	006.0	94.0	07.1	28.0
		No	27	74.15	84.7				
	Opium-like substances	Yes	65	04.17	79.4	012.0	91.0	52.1	12.0
		No	135	11.18	53.4				

Chronic lung disease	Tobacco products	Yes	48	50.18	42.3	98.2	08.0	06.1	29.0
		No	82	64.17	90.4				
	Alcoholic drinks	Yes	25	68.15	78.7	211.0	648.0	20.0	84.0
		No	37	08.16	68.7				
	Cannabis	Yes	18	22.8	29.8	40.3	07.0	09.1	28.0
		No	23	85.5	77.5				
	Inhaling	Yes	10	60.5	22.7	13.4	05.0	916.0	36.0
		No	15	86.3	30.1				
	Sedative and soporific substances	Yes	10	80.12	47.6	31.1	257.0	827.0	41.0
		No	43	04.15	98.7				
	Opium-like substances	Yes	64	28.18	04.5	35.1	246.0	08.1	28.0
		No	136	52.17	43.4				
Gastrointestinal disease	Tobacco products	Yes	39	64.17	94.4	47.2	11.0	53.0	59.0
		No	91	09.18	20.4				
	Alcoholic drinks	Yes	21	80.18	96.6	77.0	38.0	19.2	03.0
		No	41	43.14	66.7				
	Cannabis	Yes	20	05.8	85.7	85.1	18.0	04.1	30.0
		No	21	76.5	05.6				
	Inhaling	Yes	10	90.5	17.7	32.4	04.0	19.1	24.0
		No	15	66.3	17.1				
	Sedative and soporific substances	Yes	11	45.14	73.7	23.0	63.0	08.0	93.0
		No	42	66.14	80.7				
	Opium-like substances	Yes	68	04.18	90.4	61.0	43.0	61.0	54.0
		No	132	62.17	50.4				
kidney disease	Tobacco products	Yes	39	58.18	19.4	39.0	53.0	06.1	0/29
		No	91	69.17	51.4				
	Alcoholic drinks	Yes	18	94.11	12.5	07.11	001.0	09.1	008.0
		No	44	54.17	97.7				
	Cannabis	Yes	5	3	0	86.6	012.0	74.2	190.0
		No	36	41.7	31.7				
	Inhaling	Yes	9	88.3	36.1	09.1	30.0	33.1	59.0
		No	16	93.4	72.5				
	Sedative and soporific substances	Yes	17	41.16	41.9	43.2	12.0	53.0	25.0
		No	36	77.13	75.6				
	Opium-like substances	Yes	60	08.18	60.4	16.0	68.0	16.1	52.0
		No	140	62.17	66.4				

Table 4 compares the mean severity of substance use based on cardiovascular disease, liver disease, stroke, and cancer in elderly people referred to Amol Addiction Treatment Clinics in 2017. Table 4 shows that there is no significant relationship between cardiovascular disease and the severity of substance use. The severity of using cannabis was higher in those who did not have liver disease (P = 0.021). There was also no significant relationship between stroke and cancer and the severity of substance use.

Table 4: Comparison of the mean severity of substance use based on cardiovascular disease, liver disease, stroke, and cancer in elderly people referred to Amol Substance Addiction Clinics in 2017

Disease	The severity of substance use	Disease	N	Mean	SD	F	sig	T	Sig 2-tailed
Cardiovascular disease	Tobacco products	Yes	54	33.18	71.4	42.0	514.0	80.0	42.0
		No	76	69.17	22.4				
	Alcoholic drinks	Yes	20	50.18	57.7	06.0	79.0	86.1	06.0

		No	42	69.14	48.7				
	Cannabis	Yes	16	06.7	50.6	09.0	76.0	13.0	89.0
		No	25	76.6	42.7				
	Inhaling	Yes	9	66.3	32.1	20.1	28.0	71.0	48.0
		No	16	06.5	69.5				
	Sedative and soporific substances	Yes	22	22.15	50.7	16.0	68.0	47.0	63.0
		No	31	19.14	95.7				
	Opium-like substances	Yes	78	39.17	63.4	004.0	95.0	89.0	37.0
		No	122	18	64.4				
Liver disease	Tobacco products	Yes	37	89.17	11.4	86.1	175.0	11.0	91.0
		No	93	98.17	18.5				
	Alcoholic drinks	Yes	24	95.16	11.7	54.0	46.0	84.0	40.0
		No	38	26.15	01.8				
	Cannabis	Yes	15	60.3	02.2	23.19	000.0	41.2	021.0
		No	26	76.8	12.8				
	Inhaling	Yes	10	30.3	948.0	36.2	138.0	11.1	275.0
		No	15	40.5	84.5				
	Sedative and soporific substances	Yes	15	06.13	75.7	05.0	81.0	92.0	36.0
		No	38	23.15	71.7				
	Opium-like substances	Yes	51	82.16	50.4	09.0	75.0	68.1	09.0
		No	149	08.18	62.4				
Stroke	Tobacco products	Yes	20	15.19	52.3	83.0	36.0	31.1	19.0
		No	110	74.17	54.4				
	Alcoholic drinks	Yes	5	20.11	46.7	04.1	31.0	44.1	15.0
		No	57	33.16	60.7				
	Cannabis	Yes	5	20.8	25.10	02.1	31.0	44.0	65.0
		No	36	69.6	61.6				
	Inhaling	Yes	3	4	73.1	17.0	68.0	21.0	82.0
		No	22	63.4	90.4				
	Sedative and soporific substances	Yes	10	80.14	04.8	99.0	32.0	08.0	93.0
		No	43	58.14	46.6				
	Opium-like substances	Yes	26	65.17	77.3	9.1	16.0	13.0	89.0
		No	174	81.17	76.4				
cancer	Tobacco products	Yes	15	20.16	74.5	75.1	18.0	65.1	10.0
		No	115	19.18	19.4				
	Alcoholic drinks	Yes	4	50.12	93.7	36.0	54.0	92.0	36.0
		No	58	15.16	66.7				
	Cannabis	Yes	1	3	0			55.0	58.0
		No	40	97.6	06.7				
	Inhaling	Yes	2	3	0	622.0	43.0	49.0	62.0
		No	23	69.4	79.4				
	Sedative and soporific substances	Yes	7	14.13	38.3	82.5	01.0	541.0	59.0
		No	46	84.14	17.8				
	Opium-like substances	Yes	21	23.19	26.4	015.0	90.0	54.1	12.0
		No	179	59.17	65.4				

Discussion and Conclusion

The objective of this study was to investigate the relationship between the type of chronic disease and the severity of substance use in elderly people referred to Amol substance addiction clinics in 2017. The results of the present study showed that diabetes, cardiovascular disease, arthritis, stroke, cancer, and chronic lung disease were not significantly correlated with the severity of substance use. However, there was a significant relationship between hypertension and the severity of tobacco use (P = 0.012) and between gastrointestinal disease and the severity of alcohol consumption (P = 0.03).

This result is in line with the result of the study conducted by Sarkar et al (2016) who reported a relationship between elderly people's disease and substance use [10]. However, the

severity of alcohol consumption was higher who did not have kidney disease (P = 0.008) and the severity of using cannabis was higher in those who did not have liver disease (P = 0.021). In a study by Reef et al (2011), no association was found between chronic disease and substance use. Their research was carried out on people aged over 18 years [6]. As the variables of chronic disease and type of chronic disease were significantly associated with substance use, planning for improvement of healthcare services, paying attention to demographic-medical characteristics of the elderly people, and planning appropriate interventions seem to be necessary. These results help health professionals such as nurses, physicians, psychiatrists, and social workers take a deeper look into the problems of elderly people and use interventions such as self-care education, family-centered education, peer education, and counseling and follow-up. Also, providing support for the elderly people by family and community, such as increasing the share of the elderly health budget, providing more opportunities and facilities for them to access to healthcare services, providing job opportunities in their retirement period, increasing the number of elderly care centers, and planning for their leisure time can also be helpful in this regard.

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