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A Survey on the Level of Depression in Cataract Patients Hospitalized in Urmia

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Abstract: A cataract is a common cause of disability in the elderlies and is the cause of most cases of blindness worldwide. Thanks to the nature of the cataract causing disability in the visual condition, depressive disorders, also are amongst the most common disabilities associated with it. Due to the prevalence of the disease in the whole world and its consequences, this study aims to investigate the level of depression in the cataract patients hospitalized in Imam Khomeini Hospital in Urmia, Iran. This study was a cross-sectional descriptive analytic study. A sample of 94 patients was selected through simple random sampling. The data was collected using the standard Geriatric Depression Scale (GDS) and the questionnaire including participants' demographic information. In this study, the validity and reliability of the standard Geriatric Depression Scale were examined in terms of face validity, criterion validity and factor analysis and reliability (Cronbach's alpha, split-half and test-retest). Moreover, the analysis of data was carried out using SPSS Software Version 16 and through the use of absolute and relative frequency distribution tables, mean and standard deviation. Chi-square tests and t-test were also used for statistical analysis. In the current study, among 94 patients with cataract 52 patients (55.3%) were men and 42 patients (44.7%) were women. The mean age of the participants was 70.25±7.34 year and the mean of cataract disease duration of them was 1.24±0.73 year. Among the cataract patients, 51 patients (54.3%) were lack of depression, 22 patients (23.4%) had mild depression, 13 patients (13.8%) had moderate depression and 8 patients (8.5%) had severe depression. Of the patients with cataract, 7 patients (7.4%) were single, 57 patients (60.6%) were married and 30 patients (31.9%) were widowed spouses. Furthermore, only 32 patients (34%) had underlying diseases such as diabetes and 62 patients (66%) were urban dwellers. It was determined the level of depression had a significant relationship with age, the frequency of being hospitalized, the marital status having a disease, daily exercises, diet and the support of family. And it was concluded there was no significant relationship between the level of depression and the following variables: the disease duration, gender and the place of residence. Besides, taking antidepressant medication variable had a significant relationship with the level of depression, but the patients' perspective of the economic situation variable had not any significant relationship with the level of depression. The high level of depression in patients with cataract may be due to special circumstances of their disease, stressful environment, their specific hospitalization and the depression before the treatment. Performing interventional actions is recommended in order to reduce depression in these patients.

Key words: Depression, cataract, patients, interventional, recommended

INTRODUCTION

Old age is a period of life that begins at 65. Aging process is the gradual loss of function of body systems including the cardiovascular, respiratory, urogenital, endocrine glands and immune systems. Aging converts a healthy adult to a poor man with a reduction in various physiological capacities and an increase in the susceptibility to many diseases and death (Delvarian and Hashemi, 2005).

Of common psychiatric disorders in the old age period, mood disorders especially depression can be mentioned (Taban *et al.,* 2006; Abedi *et al.,* 2012). Although, the elderlies consider incidents or environmental factors as the most likely responsible for their depression, biological natural factors are the main causes of depression (Emrari and Kimiagar, 1995). Natural cognitive status is dependent on the function of different brain systems and increasing age and dwindling and functional changes occurring in these parts result in the impaired function of these parts of the brain and cognitive deficits that enjoy very different severities in the elderlies and provide a wide range of the elderlies (Delvarian and Hashemi, 2005).

Statistics show that by the year 2025, the majority of people over 65 live in the developing countries and the aging of the population accompanies with a higher prevalence of depression (Williams, 1996) and 24% of the

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elderly people suffer from clinical depression (Reynolds, 1996). The investigations conducted at the primary care level have shown that 17-37% of the elderly patients have symptoms of depression and amongst them 30% suffer from major depression (Alexopoulus, 2001). This amount is 36-46% in the elderly patients in hospitals (Teresi *et al.,* 2001; Abedi and Rostami, 2012).

A cataract is a disease of old age. The cataract is the opacity or blurring of the lens in the eye which is in addition to heart disease and arthritis, a common cause of disability in older adults (Javadi *et al.,* 2004). At least 50% of causes of blindness worldwide is cataract. According to the World Health Organization report, the cause of blindness of 27-45 million blind people in the world is cataract. In Iran, the cataract is one of the most common eye diseases and the second leading cause of blindness, but there are no accurate statistics on the cataract in Iran (Soudi, 2009). Increasing age is an important factor in the increasing prevalence of cataract. The lens in the human eyes remain almost unchanged for 40 years and then exponentially develop darkness and turbidity (Michael *et al.,* 2008).

If there is no surgery, the patient will confront blindness and experience shortcomings in the daily affairs of life; therefore, it will cause physical, emotional and spiritual effects and even feeling anger, despair and depression (Black and Hawks, 2005).

Given the debilitating consequences of chronic diseases including the cataract, a study entitled "a survey on the level of depression in cataract patients hospitalized in Urmia Imam Khomeini Hospital" was conducted. Many researches have been done in various fields but this field is less considered (Rahimi-Rad and Eishi, 2009; Ali *et al*., 2012; Rahimi-Rad *et al.,* 2015).

MATERIALS AND METHDOS

The present study was a cross-sectional descriptive study. The study population included patients with unilateral cataract of the eye hospitalized in Urmia Imam Khomeini Hospital. Through random sampling, 94 patients were enrolled. In this study the elderly people who had all the required specifications were scrutinized. The required specifications of the study population who were reluctant to cooperate included: lack of dementia, complete deafness, chronically debilitating diseases and mental retardation, with age-related cataract with the approval of ophthalmologists, age >45 years and without previous eye surgery, congenital cataract, cataract caused by trauma and chemical damage and other eye disorders and mental disorders.

In the descriptive study, the inclusion criterion consisted of reluctant subjects with unilateral cataract and without an acute illness that required characteristics such as lack of dementia, complete deafness, chronically debilitating diseases and mental retardation. The exclusion criteria included a previous history of depression, other mood disorders and the use of anti-depressant drugs. To conduct epidemiological studies on depression in the elderlies and its early diagnosis and treatment in the primary care level multiple instruments have been used (Gareri *et al.,* 2002).

In the present study, the 15-item Geriatric depression scale was completed by the participants. The GDS questionnaire consists of 15 items as follows: life satisfaction, change in the interests and pleasures, a sense of euphoria, preferring to stay at home rather than going out, the feeling of emptiness and meaningless and often being exhausted, emotional situation, the fear of feeling something bad is going to happen, feeling helpless, the feeling of having more problems with memory than most people, enjoying being alive, feeling pretty worthless in the current situation, feeling full of energy, feeling the hopelessness of their situation and feeling most people are better off than them. Ethical considerations taken in this study in the early stages included obtaining the necessary permits from the university, giving full descriptions about the goals and methods for the elderlies and obtaining the participants' written informed consent. Units participated in the research and the welfare organization were assured that all information will be safe and their names will not be mentioned. And, if desired, the research results will be provided for them. After the permission of university Research Ethics Committee, the group of patients with cataract completed the standard GDS questionnair as well as a questionnaire containing demographic information. In the present study, the validity and reliability of the standard GDS were examined in terms of face validity, criterion validity and factor analysis and reliability (Cronbach's alpha, split-half and test-retest). Furthermore, the analysis of data was carried out using SPSS Software Version 16 and through the use of absolute and relative frequency distribution tables, mean and standard deviation. Chi-square tests and t-test were also used for statistical analysis.

RESULTS AND DISCUSSION

Among 94 patients with cataract in the study, 52 (55.3%) patients were men and 42 (44.7%) patients were women. The mean age of the whole participants was 70.25±7.34 years. The mean age of the men was 71.02±7.57 year and of the women was 69.62±7.16 year ($p = 0/35$). The mean cataract disease duration of the study population was 1.24±0.73 year. The mean disease

Table 1: The frequency distribution of the depression level based on the demographic characteristics of patients with cataract

Depression level	Lack of depression	Mild depression	Moderate depression	Severe depression	Significance level
Age	67.9±6	69.6±3.6	74.1±7.4	81.1±10.9	0.00
Disease duration (times)	1.25±0.8	1.23±0.43	1.46±0.88	0.75±0.46	0.18
Frequency of being hospitalized	1.75±0.66	2.36±1.09	1.15±0.38	1.13±0.83	0.00
Gender					
Male	33 (63.5 %)	11 (21.2%)	3 (5.8%)	5 (9.6%)	0.53
Female	18 (42.9%)	11 (26.2 %)	10 (23.8%)	3 (7.1%)	
Marital status					
Single	4 (57.1%)	3 (42.9%)	0 (0 %)	0 (0 %)	0.001
Married	40 (70.2%)	9 (15.8%)	6 (10.5%)	2 (3.5%)	
Widowed	7 (23.3%)	10 (33.3%)	7 (23.3%)	6 (20%)	
Underlying diseases					
With underlying diseases	15 (46.9%)	5 (15.6%)	9 (28.1%)	3 (9.4%)	0.03
Without underlying diseases	36 (58.1%)	17 (27.4%)	4 (6.5%)	5 (8.1%)	
Place of residence					
Town	25 (50%)	11(22%)	7 (14%)	7 (14%)	0.238
Village	26 (59.1%)	11(25%)	6 (13.6%)	1 (2.3%)	
Continued. The frequency distribution of the depression level based on the demographic characteristics of patients with cataract					
Patients' perspective of the economic situation					
Bad	13 (50%)	5 (19.2 %)	6 (23.1 %)	2 (7.7 %)	0.468
Average	22 (50%)	13 (29.5%)	4 (9.1%)	5 (11.4%)	
Good	16 (66.7%)	4 (16.7%)	3 (12.5%)	1 (4.2%)	
Daily exersices					
Do daily exersices	22 (91.7%)	2 (8.3%)	0 (0.0%)	0 (0.0%)	0.000
Do not daily exersices	29 (41.4%)	20 (28.6%)	13 (18.6%)	8 (11.4%)	
Diet					
On a diet	34 (82.9%)	5(12.2%)	2 (4.9%)	0 (0%)	0.000
Not on a diet	17 (32.1%)	17 (32.1%)	11 (20.8%)	8 (15.1%)	
Supporting status at home					
With	44 (59.5%)	18(24.3%)	10 (13.5%)	2 (2.7%)	0.001
Without	7 (35%)	4 (20%)	3 (15%)	6 (30%)	
Taking antidepressant medication					
Do	0 (0%)	2(100%)	0 (0%)	0 (0%)	0.083
Do not	51 (55.4%)	20 (21.7%)	13 (14.1%)	8 (8.7%)	

duration of men was 1.06±0.37 years and for women it was 1.45±0.97 year (p = 0.013). Moreover, the mean of the number of visits of study participants was 1.76± 0.86. The number of visits mean for men was 1.81±0.93 times and for women was 1.69±0.78 times (p = 0/516).

Of the 94 patients studied, 51 cataract patients (54.3%) suffered from lack of depression, 22 patients (23.4%) had mild depression, 13 patients (13.8%) had moderate depression and 8 patients (8.5%) suffered from severe depression.

Of the patients with cataract, 7 patients (7.4%) were single, 57 patients (60.6%) were married and 30 patients (31.9%) were widowed spouses and only 32 patients (34%) suffered from underlying diseases such as diabetes and 62 patients (66%) were in urban areas.

Of the participants, 26 patients (27.7%) had a bad economic situation from their own views, 44 patients (46.8%) were at an average level and the rest had a good level. Of these patients, 24 patients (25.5%) did daily exercise while 41 patients (43.6) were under a special diet.

According to the results of Table 1, the level of depression has a significant relationship with age, the frequency of being hospitalized, the marital status and having underlying diseases at 95% level. And other variables including the disease duration, gender and the place of residence are not correlated with the level of depression.

According to the results of Table 1, the level of depression has a significant relationship with daily exercises, diet and the support of family at 95% level. While taking antidepressant medication variable has a significant relationship with the level of depression at the level of 90%, the patient's perspective of the economic situation variable is not correlated with the level of depression.

This research paper investigates the depression level of patients with cataract hospitalized in Urmia Imam Khomeini Hospital and its relationship with demographic factors. It is showed the highest percentage of patients is in the age group of 66-75 years. It has been found in many studies that age is a major cause of cataract which increases after age 65 (Phipps *et al*., 2007). In terms of mean age, the present research is consistent with the study done by Giuffre *et al*. (2005).

Also, in a study on 2160 patients above 40 year old resident in Tehran, Javadi *et al*. (2004) conclude the prevalence of cataract in patients with 40-49 years old is 1/9 % and in people over 50 years is 17.1 percent which is about 9 times greater than 40-49 years' patients.

In this study, 32 patients (34%) suffer from underlying diseases such as diabetes and 62 patients (66%) are residents in urban areas.

Of the participants, 26 patients (27.7%) have a bad economic situation from their own views, 44 patients (46.8%) are at an average level and the rest have a good level. Of these patients, 24 patients (25.5%) do daily exercises while 41 patients (43.6) are under a special diet. The cause of age-related cataract is almost 50% due to genetics and the rest is related to aging, environmental factors and systemic factors (Armstrong 2005). In a study, it is expressed individual factors such as nutrition, environmental factors (ultraviolet and infrared rays), race, age, height and socioeconomic status involve in the development of age-related cataract (Dutta, 2005). The other risk factors include medications (corticosteroids), eye inflammation, diabetes (Lewis, 2007), alcohol consumption, smoking, hypertension, body mass index, gender, trauma, eye diseases and eye surgery (Ali *et al*., 2012; Congdon and Taylor, 2003). In another study, low education and low income of the experimental group are more than those of the control group (Michael *et al.,* 2008).

In the present study, it is found that depression is higher in women than in men. In the study performed by Karl *et al*. (2002) and Kennedy and Gary (2000), older women are more likely to develop depression but with increasing age, the prevalence of depression in both genders is nearly equal. Moreover, the prevalence of cognitive impairment in both genders is the same, so this issue is consistent with the results of the present study.

CONCLUSION

Based on the results of this study, reducing the elderly people's stress, better patient care, suitable training of family members and loved ones, prevention of unnecessary drugs and doing proper exercises can reduce to an acceptable extent the level of depression and delay cognitive impairments in the elderly people.

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