

## **Assessment of Health Professionals' Views and Beliefs about Mental Illnesses: A Survey from Turkey**

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**Abstract:** Negative beliefs and prejudices might lead to stigmatization, violation of basic human rights and discriminatory behaviors. To determine health professionals' views and beliefs about mental illnesses. The sample of this descriptive study comprised 317 health professionals working in Sivas Numune Hospital. Data were collected with the Personal Information Form, Stigma Assessment Questionnaire and Beliefs toward Mental Illness (BMI) Scale. For the statistical analysis, percentage distribution, t-test, ANOVA and Tukey test were used. Of the participants, 18.6% had a relative with a mental illness, and 63.7% stated that people with a mental illness. Whereas half of the health professionals stated favorable opinion about patients with schizophrenia, 41% of them said that patients with schizophrenia might be dangerous and cause other people harm. The mean scores obtained from the subscales of the BMI scale were as follows:  $23.74 \pm 6.66$  (min-max:6-40) for the dangerousness subscale,  $29.55 \pm 9.88$  (min-max:0-55) for the helplessness and poor interpersonal relationships subscale, and  $1.76 \pm 2.30$  (min-max: 0-10) for the shame subscale. The mean total score of the BMI scale was  $55.06 \pm 16.06$  (min-max: 6-100). Of the health care professionals, the nurses/midwives, high school graduates, those with income equal to expenditure and those who had negative opinions about patients with schizophrenia obtained significantly higher total scores from the BMI Scale ( $p < 0.05$ ). Although the majority of the health care professionals had positive opinions of patients with schizophrenia, nearly, half of them thought that patients with schizophrenia could be dangerous and cause harm to other people.

**Keywords:** Belief, health care professionals, mental illnesses, stigmatization, views of health professionals.

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### **I. INTRODUCTION**

Mental illnesses are prevalent in developed and developing countries [1]. According to the World Health Organization (2002), one out of every four people in the world face the risk of a mental illness [2]. According to the Mental Health Profile of Turkey, 18% of the population suffers a mental illness at some point in their lives. In the National Mental Health Action Plan report, among the mental illnesses, schizophrenia ranked second (2.3%) both in men and in women [3]. Schizophrenia itself, side effects of some medication used for schizophrenia, appearance or behaviors of patients with schizophrenia which disturb other people, and the society's perceiving schizophrenia as violence and a damage-causing disorder can cause society to develop negative attitudes towards schizophrenia [4]. That people are frightened of patients with a mental illness and that mental illness is not perceived as an illness affect such attitudes [5]. In a community, individuals with mental disorders are usually perceived as weird, scary, hard to communicate, unreliable and dangerous, and thus they are devalued [6,7].

People who are the part of socialization in a culture they belong to develop mental-illness related concepts and beliefs in the early years of their lives under the influence of the formal education, family, their own personal experiences and media [1,8]. Negative beliefs in society about mental illnesses not only affect adaptation of individuals with mental illnesses to society, their coping with the disease effectively, socialization, admission to health facilities, quality of life, and compliance to treatment and care, but also lead to unemployment, inadequate education and income losses [6,9-11]. These negative results drive individuals with a mental illness to desperation, and reduce their self-esteem and self-confidence [12,13].

Negative beliefs and prejudices might lead to stigmatization, violation of basic human rights and discriminatory behaviors [13]. Stigmatization is a set of behaviors leading to the separation of people with certain diseases from others or exclusion of them from society by discriminating against and disparaging them [5]. Among the important factors causing stigmatization are a person's having a psychiatric illness, being treated in psychiatric clinics and/or taking psychiatric medication [13].

Both society and health professionals play a part in the stigmatization of individuals with deteriorated mental health [13]. Of the mental illnesses, the one stigmatized most is schizophrenia [7]. Studies investigating health professionals' attitudes towards patients with schizophrenia revealed that their attitudes were similar to other people's attitudes [10]. Society and health professionals' schizophrenia-related misbeliefs are that schizophrenia is untreatable, patients with schizophrenia are dangerous and aggressive, and they should not be employed [5]. Attitudes of health professionals providing health services, education and counseling for patients with mental disorders are important because their attitudes directly affect the help these patients receive [4,8]. Given that mental, social and cultural factors shape attitudes and that health professionals represent the community they serve, it is necessary to determine health professionals' attitudes. Health professionals' awareness of their attitudes towards mental disorders and coping with their negative attitudes will affect the quality of care and thus patients' quality of life and satisfaction. This will also help patients with mental disorders receive optimal health services without being exposed to any discrimination. Health professionals' negative attitudes towards schizophrenia, their approaches leading to social isolation and stigmatization will adversely affect the community's attitudes towards schizophrenia and thus might lead to discrimination. The present study aims to determine health professionals' views and beliefs regarding mental illnesses.

## **II. Materials And Methods**

### ***Sample***

The target population of this descriptive study comprised 450 health professionals including physicians, nurses, midwives and other health professionals working in departments other than mental health in Sivas Numune Hospital in Turkey. Of the target population, 317 accepted to participate in the study between 15 and 30 April 2013 comprised the study sample.

### ***Data collection***

The research data were collected with personal information form, Stigma Assessment Questionnaire and Beliefs toward Mental Illness Scale.

***Personal Information Form:*** The form developed by the researchers through the review of the literature includes 9 questions on the socio-demographic characteristics of the participants and 7 questions on their views related to mental illnesses [14,15].

***Stigma Assessment Questionnaire:*** The questionnaire consists of eight questions to determine the participants' views on schizophrenia. The items are rated on a 5-point Likert scale (1=Strongly disagree 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree). The lowest and highest possible scores to be obtained from the scale are 8 and 40 respectively [15].

***Beliefs toward Mental Illness (BMI) Scale:*** The scale was developed by Hirai and Clum (2000) to determine positive and negative beliefs of individuals with different cultural characteristics towards mental illnesses in the United States. The scale consists of 21 items rated on a 6-point Likert type scale (0=completely disagree, 1=mostly disagree, 2=partly disagree, 3=partly agree, 4=mostly agree, 5=completely agree). The lowest and highest possible scores to be obtained from the scale are 0 and 105 respectively. Higher scores obtained from the overall scale and subscales indicate negative beliefs. The BMI scale consists of three subscales (Dangerousness subscale, Helplessness and poor interpersonal relationships subscale, Shame subscale). In the validity and reliability study of the scale conducted by Bilge and Çam (2008) in Turkey, Cronbach's alpha coefficient for the overall scale was 0.82 [14].

### ***Procedure***

Before the application, the participants were informed about how they would fill in the data collection tools. The researchers handed out the questionnaires to the participants and collected them after the participants filled them in. It took approximately 10-15 minutes to fill in the questionnaires.

### ***Data analysis***

The data obtained from the study were evaluated using the Statistical Package for Social Sciences for Windows 14.0. In the analysis of data, percentage distribution, significance of the difference between two means test and ANOVA were used whereas the Tukey test was used to determine from which group the difference arises. In determining whether there was a statistically significant relationship between the variables,  $p<0.05$  was used.

### ***Ethical considerations***

Before the study was started, the approval of Clinical Research Ethics Committee (Decision no: 2013-04/12) and the written permission from Numune Hospital where the study was to be carried out were obtained.

### III. Findings

Of the participants in the present study, 27.4% were in the 30-34 age group, 63.1% were university graduates, 67.5% were women, 79.2% were married, 62.1% were nurses/midwives, 89.6% grew up in urban areas, 73.5% had children, 54.6% had an income equal to expenses, 90.5% had a nuclear family, and 18.6% had a relative with a mental disorder. Sixty-three point seven percent of the respondents stated that people with mental disorders caused them distress.

Whereas half of the health professionals stated favorable opinion about patients with schizophrenia, 41% of them said that patients with schizophrenia might be dangerous and cause other people harm, 47% did not want to have neighbors with schizophrenia and 44.8% stated that people with schizophrenia are bizarre people (Table 1)

**Table 1:** Scores Health Professionals Obtained from the Stigma Assessment Questionnaire

Statements	Disagree		Neither disagree nor agree		Agree	
	n	%	n	%	n	%
Patients with schizophrenia have poor personality traits	188	<b>59.3</b>	91	28.7	38	12.0
Patients with schizophrenia cannot take care of themselves	199	<b>62.8</b>	61	19.2	57	18.0
Patients with schizophrenia are dangerous and can cause harm any moment	118	37.2	69	21.8	130	<b>41.0</b>
Patients with schizophrenia are not different from the children	177	<b>55.8</b>	76	24.0	64	20.2
Patients with schizophrenia cannot carry out their responsibilities	156	<b>49.2</b>	65	20.5	96	30.3
I do not want to have neighbors with schizophrenia	93	29.3	75	23.7	149	<b>47.0</b>
Patients with schizophrenia are bizarre people	99	31.2	76	24.0	142	<b>44.8</b>
It is not worth spending time and money for patients with schizophrenia	267	<b>84.2</b>	35	11.0	15	4.8

The mean scores obtained from the subscales of the BMI scale were as follows:  $23.74 \pm 6.66$  (min-max: 6-40) for the dangerousness subscale,  $29.55 \pm 9.88$  (min-max: 0-55) for the helplessness and poor interpersonal relationships subscale, and  $1.76 \pm 2.30$  (min-max: 0-10) for the shame subscale. The mean total score of the scale was  $55.06 \pm 16.06$  (min-max: 6-100). The mean scores obtained from the dangerousness and helplessness and poor interpersonal relationships subscales were above the average (Table 2).

**Table 2:** Mean Scores Obtained from the Beliefs Toward Mental Illness (BMI) Scale

Subscales	Min-Max	Mean
Dangerousness	6-40* (0-40)**	$23.74 \pm 6.66$
Helplessness and poor interpersonal relationships	0-55* (0-55)**	$29.55 \pm 9.88$
Shame	0-10* (0-10)**	$1.76 \pm 2.30$
Total	6-100* (0-105)**	$55.06 \pm 16.06$

\* scores health professionals obtained from the BMI scale

\*\* min-max scores for the BMI scale

A statistically significant difference was found between the mean scores obtained from the BMI scale and its dangerousness and helplessness and poor interpersonal relationships subscales, and the following items in the Stigma Assessment Questionnaire: "Patients with schizophrenia have poor personality traits," "Patients with schizophrenia are dangerous and can cause harm any moment", "Patients with schizophrenia are not different from the children," "Patients with schizophrenia cannot carry out their responsibilities," "I do not want to have neighbors with schizophrenia" ( $p<0.05$ ). A statistically significant difference was determined between the mean scores obtained from the BMI scale, its dangerousness, helplessness and poor interpersonal relationships and shame subscales, and the following statements: "Patients with schizophrenia are bizarre people" and "It is not worth spending time and money for patients with schizophrenia" ( $p<0.05$ ). The mean total scores obtained from the BMI scale by the health professionals who had negative opinion of patients with schizophrenia were high. The difference between the mean scores for the BMI scale, its dangerousness, helplessness and poor interpersonal relationships and shame subscales, and the statement "Patients with schizophrenia cannot take care of themselves" was not statistically significant ( $p>0.05$ ) (Table 3).

**Table 3:** Mean Scores Health Professionals Obtained from the Beliefs Toward Mental Illness (BMI) Scale and its Subscales According to the Items in the Stigma Assessment Questionnaire

	Subscales of the BMI Scale			
	Dangerousness  $X \pm SD$	Helplessness and poor interpersonal relationships  $X \pm SD$	Shame  $X \pm SD$	Total BMI Scale  $X \pm SD$
<b><i>Patients with schizophrenia have poor personality traits</i></b>				
Disagree	22.45±6.54	27.76±9.64	1.60±2.23	51.81±15.61
Neither disagree nor agree	24.67±5.82	31.06±9.30	1.97±2.39	57.71±14.46
Agree	27.92±7.23	34.78±10.16	2.10±2.39	64.81±17.17
F	F=12.703	F=10.030	F=1.283	F=12.992
p	<b>p=0.000*</b>	<b>p=0.000*</b>	p=0.279	<b>p=0.000*</b>
<b><i>Patients with schizophrenia cannot take care of themselves</i></b>				
Disagree	23.51±6.61	28.99±9.59	1.72±2.28	54.23±1.56
Neither disagree nor agree	24.01±6.77	29.75±11.80	2.09±2.40	55.86±1.84
Agree	24.28±6.81	31.28±8.50	1.57±2.24	57.14±1.49
F	F=0.354	F=1.202	F=0.857	F=0.819
p	p=0.702	p=0.302	p=0.426	p=0.442
<b><i>Patients with schizophrenia are dangerous and can cause harm any moment</i></b>				
Disagree	21.54±6.43	27.53±9.67	1.52±2.25	50.60±15.62
Neither disagree nor agree	23.11±6.02	30.33±8.94	2.21±2.44	55.66±14.48
Agree	26.08±6.49	30.96±10.30	1.75±2.24	58.80±16.35
F	F=16.153	F=4.089	F=1.985	F=8.518
p	<b>p=0.000*</b>	<b>p=0.018*</b>	p=0.139	<b>p=0.000*</b>
<b><i>Patients with schizophrenia are not different from the children</i></b>				
Disagree	22.40±6.44	27.36±9.47	1.60±2.18	51.36±15.43
Neither disagree nor agree	24.77±6.40	30.84±9.61	2.15±2.55	57.77±15.47
Agree	26.25±6.73	34.07±9.64	1.76±2.29	62.09±15.68
F	F=9.500	F=12.557	F=1.542	F=12.786
p	<b>p=0.000*</b>	<b>p=0.000*</b>	p=0.216	<b>p=0.000*</b>
<b><i>Patients with schizophrenia cannot carry out their responsibilities</i></b>				
Disagree	22.60±6.37	27.99±9.78	1.58±2.18	52.19±15.27
Neither disagree nor agree	23.69±6.10	29.43±9.96	2.33±2.60	55.46±16.18
Agree	25.63±7.13	32.16±9.54	1.67±2.22	59.47±16.37
F	F=6.327	F=5.451	F=2.564	F=6.346
p	<b>p=0.002*</b>	<b>p=0.005*</b>	p=0.079	<b>p=0.002*</b>
<b><i>I do not want to have neighbors with</i></b>				

<b><i>schizophrenia</i></b>	20.89±5.82 22.96±6.02 25.92±6.75 F=18.919 p <b>=0.000*</b>	26.36±8.95 29.28±10.62 31.67±9.55 F=8.711 <b>p=0.000*</b>	1.44±2.06 2.28±2.64 1.71±2.22 F=2.863 p=0.059	48.69±14.18 54.52±16.23 59.32±15.81 F=13.580 <b>p=0.000*</b>
<b><i>Patients with schizophrenia are bizarre people</i></b>	21.09±6.29 23.52±6.15 25.71±6.56 F=15.376 p <b>=0.000*</b>	26.65±9.72 29.82±9.60 31.42±9.73 F=7.081 <b>p=0.001*</b>	1.27±1.87 2.35±2.59 1.80±2.34 F=4.900 <b>p=0.008*</b>	49.02±15.37 55.71±14.65 58.94±1608 F=11.989 <b>p=0.000*</b>
<b><i>It is not worth spending time and money for patients with schizophrenia</i></b>	23.39±6.51 23.94±6.68 29.60±7.09 F=6.376 p <b>=0.002*</b>	28.85±9.27 31.82±12.84 36.60±9.75 F=5.555 <b>p=0.004*</b>	1.59±2.15 2.25±2.63 3.66±3.03 F=6.856 <b>p=0.001*</b>	53.85± 15.25 58.02±18.54 69.86±16.76 F=8.073 <b>p=0.000*</b>

\*p<0.05

Comparison of socio-demographic characteristics with the BMI scale revealed that the total BMI scale scores of the nurses/midwives, high school graduates and those with the income equal to expenses were statistically higher (p<0.05). When the subscales of the BMI scale were evaluated, it was determined that the nurses/midwives and high school graduates obtained higher scores from the dangerousness, helplessness and poor interpersonal relationships and shame subscales whereas those in the 20-24 age group and those having income equal to expenses obtained higher scores only from the shame subscale (p<0.05) (Table 4).

**Table 4:** Mean Scores Health Professionals Obtained from the Beliefs Toward Mental Illness (BMI) Scale and its Subscales According to Their Socio-Demographic Characteristics

	Subscales of the BMI Scale			
	Dangerousness X±SD	Helplessness and poor interpersonal relationships X±SD	Shame X±SD	Total BMI Scale X±SD
<b><i>Age</i></b>				
20-24	25.40±7.18	30.31±9.86	3.09±2.68	58.81±17.81
25-29	24.23±5.97	29.59±8.91	1.86±2.07	55.69±14.83
30-34	24.75±7.02	30.13±9.86	1.89±2.48	56.79±16.13
35-39	22.11±6.52	27.88±10.87	1.62±2.21	51.62±17.03
≥40	23.36±6.51	30.14±9.65	1.35±209	54.86±15.21
F	F=2.089	F=0.692	F=2.703	F=1.408
p	p=0.082	p=0.598	<b>p=0.031*</b>	p=0.231
<b><i>Education</i></b>				
High school	26.63±6.25	34.53±10.07	2.26±2.31	63.43±15.43
University	24.52±6.42	30.21±10.04	1.98±2.49	56.71±15.97
Postgraduate	20.97±6.53	26.32±8.42	1.10±1.61	48.40±14.21
F	F=12.503	F=9.368	F=5.363	F=13.615
p	<b>p=0.000*</b>	<b>p=0.000*</b>	<b>p=0.005*</b>	<b>p=0.000*</b>
<b><i>Profession</i></b>				
Nurse/midwife	24.49±6.23	30.27±9.38	2.04±2.41	56.81±14.83
Physician	21.00±6.55	26.77±8.67	1.16±1.73	48.93±14.79
Other health personnel	25.06±7.54	31.00±12.85	1.60±2.47	57.66±20.48
F	F=8.895	F=4.056	F=4.201	F=7.517
p	<b>p=0.000*</b>	<b>p=0.018*</b>	<b>p=0.016*</b>	<b>p=0.001*</b>

<b>Income-expenditure status</b>				
Income less than expenses	24.77±7.12	30.12±11.10	1.84±2.52	56.75±17.53
Income equal to expenses	23.80±6.31	30.25±9.55	1.98±2.33	56.05±15.46
Income greater than expenses	22.40±6.89	27.07±8.93	1.11±1.80	50.59±15.23
F	F=2.309	F=2.701	F=3.552	F=3.394
p	p=0.101	<b>p=0.069*</b>	<b>p=0.030*</b>	<b>p=0.035*</b>

\* p<0.05

#### IV. Discussion

In this present study, most of the health care professionals had positive opinions of patients with schizophrenia. This is probably because they did not deal with individuals with mental illnesses or did not directly witness negative behaviors displayed by those people or the symptoms of mental illnesses. Another reason was that people in general feel pity for people with disabilities. Similar to the results of the present study, the results obtained in Shyangwa et al.'s (2003) study conducted to assess nurses' knowledge of and attitudes towards mental illnesses indicated that the majority of the nurses displayed positive attitudes towards mental illnesses [11].

Nearly half of the respondents stated that patients with schizophrenia might be dangerous and cause other people harm. This might be due to repulsive physical appearance of patients with schizophrenia, and their behaviors. The health professionals may have thought that individuals with mental disorders are incompetent, aggressive, dangerous and unreliable, because these patients are perceived to have the potential to engage in unpredictable behaviors such as irresponsibility and lack of self-control. Furthermore, these findings suggest that health professionals need more information about the treatment and course of schizophrenia, and do not know much about mental illnesses. Of the attitudes non-psychiatric health professionals display towards patients with mental disorders, uneasiness and reluctance to establish contact with these patients are noteworthy. In several studies, the majority of non-psychiatric health professionals perceive patients with mental illnesses as offensive [16-18]. In Shyangwa et al.'s (2003) study conducted to assess nurses' knowledge of and attitudes toward mental illnesses, while 30% of the respondents perceived individuals with mental illnesses as aggressive and dangerous, 37.3% used the word "crazy" to describe them [11]. In Kapungwe et al.'s (2011) study, nearly half of the respondents perceived individuals with mental illnesses as aggressive [19].

Another reason underlying health professionals' negative opinions of schizophrenia might be due to the fact that they are not knowledgeable enough about how to deal with patients with schizophrenia and their behaviors [12]. Society's prejudices, general conditions of psychiatric services, media and movies about psychiatric patients and psychiatric clinics may affect health professionals' negative views of and stigmatizing attitudes toward people with mental disorders [20]. There are also studies reporting that even health professionals working in psychiatry clinics display negative attitudes toward people with mental disorders [6]. This might be attributed to their experiences in their professional life rather than prejudices.

Comparison of views about mental illnesses and the scores for the BMI scale revealed that total BMI scale scores of health professionals with negative opinions were higher. Nearly half of the respondents stated that they did not want to have neighbors with schizophrenia and that people with schizophrenia were bizarre people. Studies conducted with non-psychiatric health professionals revealed that more than half of them kept social distance with patients with schizophrenia, and that the vast majority of them exhibited negative and dismissive attitudes towards patients with schizophrenia [18]. In Aker et al.'s (2002) study investigating primary-care physicians' opinions about people with schizophrenia, more than half of the physicians stated that patients with schizophrenia should not be allowed to freely act in the community, that they would be uncomfortable having a neighbor with schizophrenia, and that these people would not make right decisions about their lives [17]. In the literature, it has been emphasized that not knowledge but negative attitudes toward and judgments about patients come to the foreground, that attitudes toward mental health problems are not sufficiently positive, and that dismissive and stigmatizing attitudes towards patients with schizophrenia among physicians are prevalent [10]. Studies conducted in Turkey indicate that lay people have negative opinions of patients with schizophrenia as do health professionals [7]. Students who are candidates of health professions also have negative opinions about patients with schizophrenia. Negative opinions they form during school years cause them to maintain the same opinion in work life [21].

The scores obtained from the BMI scale and its subscales except for the shame subscale were above average. Based on this, it can be said that the participants had favorable beliefs about mental illnesses only in terms of the shame subscale. People as part of the socialization process in a culture they belong to develop mental illness-related concepts and beliefs in the early years of their lives. In other studies on the issue, adolescents and individuals who did not yet begin working life achieved scores similar to those of adults working in the health field [21,22].

Comparison of socio-demographic characteristics with the BMI scale scores revealed that the health professionals in the 20-24 age group had more negative beliefs about mental illnesses than did the health

professionals over age 40. The younger health professionals' having more negative beliefs about mental illnesses might be due the fact that they lack adequate knowledge and experience about the diagnosis, etiology and treatment of mental diseases, and face patients with mental illnesses less often. However, that international and national projects on the prevention of stigmatization have been put into effect only recently and that these topics are not included in the curricula may have affected this situation. Fears and lack of knowledge lead to prejudices in society. Therefore, to reduce these prejudices and stigmatization in the society, informative and educational campaigns should be widely held in the different segments of society [23]. By improving negative attitudes towards psychiatric disorders during adolescence, social distance between adults to psychiatric patients can be reduced [22]. Studies conducted with adolescents and medical school students indicate that they exhibit stigmatizing and negative attitudes towards schizophrenia [23,24]. Ndetei et al., (2011) conducted a study with 684 non-psychiatric hospital employees and found that awareness of mental illnesses of physicians at the age of 40 or over were more positive, which supports the results obtained from the present study [8]. However, the results of Aker et al.'s (2002) study of primary-care physicians were different from the results of this present study, because their results indicated that mean scores were dependent on the age factor, and that as the age increased so did the rate of negative opinions of schizophrenia [17]. In Kapungwe et al.'s (2011) study of primary caregivers, participants over the age of 40 were more uncomfortable with individuals with mental illnesses than were participants in the 19-25 age group [19]. Unlike the results of the present study, the results of a study conducted by Bağ and Ekinci (2005) to investigate attitudes displayed by health personnel towards individuals with mental health problems revealed that there was no significant relationship between age groups and attitudes towards mental health problems [18]. This is probably due to the fact that the participants' age groups in the two studies were different.

Health professionals with the Master's degree had a more positive belief about the items in the dangerousness, helplessness, poor interpersonal relationships and shame subscales. In their study (2005), Bağ and Ekinci found results similar to those in the present study indicating that university graduate health professionals' attitudes towards individuals with mental health problems were more positive [18]. In their study (2011), Ndetei et al. determined that knowledge positively contributed to attitudes towards mental illnesses [8]. Performing attempts to develop health students' awareness of their own feelings and thoughts, and rather than providing theoretical training on attitudes towards mental illnesses, enabling them to form favorable beliefs and opinions of mental illnesses during practical training are considered to play a role in reducing their negative beliefs and opinions likely to arise early in their professional lives in the future. Corrigan and Watson (2002) stated that providing accurate information about mental illnesses might help eliminate false beliefs and doubts in the community and reduce mental illness-related fears and social distance [19].

Physicians' beliefs about the items in the dangerousness, helplessness and poor interpersonal relationships and shame subscales were more positive. The fact that patients are in direct contact with nurses and health workers other than physicians accounts for these health professionals' negative attitudes [20]. Many health professionals might have difficulty in understanding people with mental illnesses in clinics and in the community and thus might form negative opinions [18].

Medical staff with income greater than expenses had a more positive belief about the items in the dangerousness, helplessness and poor interpersonal relationships and shame subscales. An individual's perception of his/her economic level as inadequate leads to negative feelings and judgments such as worthlessness, fear of rejection, despair, shame and low self-confidence and thus reduction in self-esteem. Individuals who perceive themselves as worthless and inadequate might have negative judgment about individuals with mental illnesses. In Çam and Bilge's study (2011) conducted with non-medical people, people with low economic levels perceived people with mental illness as dangerous and had negative beliefs about them [25].

## **V. Conclusion And Suggestions**

Although the majority of health care professionals had positive opinions of patients with schizophrenia, nearly half of them thought that patients with schizophrenia could be dangerous and cause other people harm. The total mean score they obtained from the BMI scale was above 50%. Of the participants, nurses/midwives, high school graduates and those with income equal to expenses had negative opinions about mental illnesses. In the light of these results, it is recommended to provide training for health care personnel during school years and after graduation to help them raise awareness of their thoughts and feelings regarding mental illnesses, recognize the underlying causes of their feelings or behaviors and carry out the treatment and care as required by their professions free of social prejudices. It is also recommended to inform them of ethical issues.

### ***Limitations of the study***

The results obtained from this study are applicable only to the study sample and cannot be generalized.

**Conflict of interest**

The authors declare that there are no conflicts of interest.

\*The study was presented at a posterpresentation in the 6th International Congress on Psychopharmacology & 2nd International Symposium on Child and Adolescent Psychopharmacology 16-20 April 2014, Antalya, Turkey.

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