

# Attitudes towards Patients with Mental Disorders among People of Al-Ahsa, Saudi Arabia: Cross-Sectional Study

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**Received:** 04-Feb-2022,  
Manuscript No. AMHSR-22-53998;  
**Editor assigned:** 07-Feb-2022,  
Pre QC No. AMHSR-22-53998(PQ);  
**Reviewed:** 14-Feb-2022,  
QC No. AMHSR-22-53998;  
**Revised:** 21-Feb-2022,  
Manuscript No: AMHSR-22-53998(R);  
**Published:** 27-Feb-2022,  
DOI: 10.54608.annalsmedical.2022.27

## Abstract

**Background:** Mental disorders are among the most stigmatizing conditions worldwide. The stigma towards people with mental health disorders became an extra burden to the patients in addition to the condition itself. Stigma of mental disorders is classified into: public stigma, institutional stigma, and self-stigma. The purpose of this study was to identify beliefs underlying mental disorders stigma and the general attitude of the community to develop efficient and well-targeted anti-stigma programs. **Materials & Methods:** It was a cross-sectional prospective descriptive study to determine the attitudes of general population in Al-Ahsa governorate, Saudi Arabia towards people with mental disorders conducted between Oct 2020 till Dec 2021. Subjects above the age of 18 years were the study population. Simple random sampling was used to select the participants from the population register of Al-Ahsa Municipal Corporation. The survey was conducted through structured interview done in public health centers that are distributed according to the new divisions of primary health care sectors in Al-Ahsa Health Cluster, using questionnaires which consisted of the information on the socio-demographic characteristics of the participants such as age, sex, educational qualification, marital status, area of living, history of mental illness if any and their share of giving care to mentally ill patients. The second part of the survey contained the questionnaires which were adopted from the Community Attitudes toward Mental Illness (CAMI) developed by Canadian researchers. The data were entered and analyzed by using the SPSS, version 25. Descriptive statistics was presented using counts, proportions (%), mean  $\pm$  standard deviation whenever appropriate. The comparison of attitude between the demographic characteristics was performed using both uni-bivariate and multivariate analysis/binary logistic regression. A p-value cut off point of 0.05 at 95% CI was used to determine statistical significance. Overall stigma against patients with mental illness was computed by summing up the subscales. Higher scores indicated less stigma attitudes against patients with mental illness. **Results:** A total of 447 subjects participated in this study making the response rate of 97%. Majority of the participants were female (61%, N=274). Eighty 8% of the participants had no prior experience with mental illness, and approximately 32% had provided care to a mentally ill individual. A higher score of public stigmas toward mental illness was found in 50.31% of the participants. The mean scores for all the scales and subscales were as follows: CAMI (124.98  $\pm$  15.59), SR (30.83  $\pm$  4.06), AU (32.50  $\pm$  4.0), BE (28.68  $\pm$  3.27) and CMHI (32.97  $\pm$  4.26). Age groups and marital status had a significant association ( $p < 0.05$ ) with the attitude towards mentally ill patients. **Conclusion:** We presented data on population attitudes towards mental illness in Al-Ahsa district of Saudi Arabia. Unlike many studies, our study showed a comparatively better positive attitude of the population towards mentally ill patients. Half of the studied subjects had negative attitude. The response on the questionnaires on different subsets of attitude showed that the population' attitude towards mentally sick patients co-existed with more benevolent tendencies such as support by more

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**How to Cite this Article:** Alsaleh K, et al. Attitudes towards Patients with Mental Disorders among People of Al-Ahsa, Saudi Arabia: Cross-Sectional Study. Ann Med Health Sci Res. 2022;12:85-92.

spending from taxes for their care. However, efforts should be made to address the negative attitude of the population by anti-stigma program. There is a need to build more benevolent attitudes. This can be achieved by improvements in the educational sector and increased literacy.

**Keywords:** Attitude; Mental illness; Community

## Introduction

Mental disorders are usually defined by a combination of how a person behaves, feels, perceives, or thinks. The American Psychiatric Association (APA) defines mental disorders as “a syndrome characterized by clinically significant disturbance in an individual’s cognition, emotion regulation, or behavior that reflects a dysfunction in the psychological, biological, or developmental processes underlying mental functioning.”<sup>[1]</sup> WHO estimates that there are 450 million people in the world currently suffering from some kind of mental disorders and constitutes 14% of the global burden of disease.<sup>[2]</sup> The prevalence of psychiatric disorders in KSA is 18% among patient attending primary health care centers.<sup>[3]</sup>

Although the etiology of most mental disorders is unknown, it has been found that different biological, psychological, and environmental factors can all contribute to the development or progression of mental disorders.<sup>[1]</sup> Public beliefs about the etiology of mental illness is affected by their culture.<sup>[4]</sup> A meta analysis has showed that stress is the most reported cause for mental illness followed by spiritual causes, such as the wrath of God.<sup>[5]</sup> A similar Pakistani study has found that only 30% of the participants thought mental illness was a natural disease, while the remainder attributed mental illness to superstitious ideas or social issues (i.e. unemployment).<sup>[6]</sup> An interesting element in Islamic teaching is the idea that mental disorders as well as other ailments might be an effect of the will of God and not necessarily a punishment for sins.<sup>[7]</sup> Mental disorders are among the most stigmatizing conditions worldwide. According to Corrigan PW, stigma is defined as “a set of negative attitudes and beliefs that motivate individuals to fear, reject, avoid, and discriminate against people with mental illness”. The stigma towards people with mental health disorders became an extra burden to the patients in addition to the condition itself. Stigma of mental disorders is classified into: public stigma, institutional stigma, and self-stigma. Stigma is mainly manifested in three ways: stereotype, prejudice and discrimination. A common stereotype is that people with serious mental disorders are seen as an unpredictable and potentially violent, and they are perceived as an incompetent people who can only work in menial jobs.<sup>[8]</sup> The majority of mental patients do not behave in a conspicuous way. Instead, people with depression, anxiety disorders, and most persons suffering from psychotic disorders, are silent and withdrawn. This and other stereotypes depend, in part, on the cultural context; what is perceived as a mental disorder, what is known, and what is believed about the background and the nature of different expressions of mental distress.<sup>[2]</sup> There are several ways for discrimination against people who have a mental disorder. One example is loss of jobs opportunities, as the employers refuse to hire them. Another example is segregation, by sending the patients to institutions removed from their community.<sup>[8]</sup> This can lead psychiatric

patients to withdraw from their family and society and they avoid asking for help.<sup>[9]</sup>

Due to strong beliefs in superstition among the public, they often seek help from non- medical practitioners, before going to a psychiatrist.<sup>[10,11]</sup> Seeking non-medical help from faith healers, religious advisors, or any agency that provides non-medical treatment can hinder recovery.<sup>[12,13]</sup>

Several studies conducted in western Europe and north America showed that mental disorder stigma is a major problem in the community.<sup>[14]</sup> There are limited studies conducted in Middle east, especially Arab world, about the beliefs and perceptions of individuals regarding people with mental illness.<sup>[15]</sup> The purpose of the present study was to identify beliefs underlying mental disorders stigma and the general attitude of the community to develop efficient and well-targeted anti-stigma programs. This study aimed to determine the attitudes of general population in Al-Ahsa governorate, Saudi Arabia towards people with mental disorders.

## Materials and Methods

This study was cross sectional descriptive study conducted in Al-Ahsa district of Saudi Arabia during the period Oct 2020 to Dec. 2021. All the Saudi national of Al Ahsa district aged 18 years and above were the study population. The sample size was calculated using a Fishers formula by cited by Mugenda et al.,<sup>[16]</sup>  $n = Z^2pq / e^2$  where n=the desired sample size, Z=the standard normal deviate at 95% confidence level (1.96), P=the estimated proportion of the target population was 50% whose attitude towards mentally ill patients was negative (based on one previous Indian study),  $q=1-p$ , and e=desired level of precision (0.05) . The sample size was 385 subjects. A 20% of the calculated sample size was added to cater for non-response i.e. 20% of 385=77+385=462. Thus, the total sample size was 462 participants. Simple random sampling was used to select the participants from the population register of Al Ahsa Municipal Corporation. The data were collected through structured interview done in public health centers that distributed according to the new division of primary health care sectors in Al-Ahsa Health Cluster, using specially pre designed, pretested questionnaires which consisted of information on the socio-demographic characteristics of the participants such as age, sex, educational qualification, marital status, area of living, history of mental illness if any and their share of giving care to mentally ill patients. The second part of the survey questionnaires were adopted from the Community Attitudes toward Mental Illness (CAMI) developed by Canadian researchers. The forty-item CAMI scale was used to measure public stigma attitudes towards mental illness. All items were rated according to a five-point likert scale (1=strongly agree to 5=strongly disagree). Negatively stated items were reversely recoded for analysis. The scale had four subscales, each with

10 items: Authoritarianism (AU), Benevolence (BE), Social Restrictiveness (SR), and Community Mental Health Ideology (CMHI). Authoritarianism represented a “view of the mentally ill person as someone who is inferior and requires supervision and coercion.” Benevolence corresponded to “a humanistic and sympathetic view of mentally ill persons”. Social restrictiveness was meant “the belief that mentally ill patients are a threat to society and should be avoided.” Community Mental Health Ideology contained the questionnaire related to “the acceptance of mental health services and the integration of mentally ill patients in the community. Higher AU scores, lower BE scores, lower SR scores and higher CMHI scores indicated higher stigma. Overall stigma against patients with mental illness was computed by summing up the subscales. Higher scores indicated less stigma attitudes against patients with mental illness.<sup>[17]</sup> These scales were made available in Arabic and English language.<sup>[16]</sup> The participation in the survey was voluntary and anonymous. Consent was taken from each participants. Information taken were kept confidential and handled in a safe and a secretive environment. The data were entered and analyzed by using the SPSS version 25. Descriptive statistics was presented using counts, proportions (%), mean  $\pm$  standard deviation whenever appropriate. The comparison of attitude between the demographic characteristics was performed using both uni- bivariate and multivariate analysis/binary logistic regression. A p-value cut off point of 0.05 at 95% CI was used to determine statistical significance. The proposal was submitted to the ethics and research committee and got approval before commencing the study.

## Results

A total of 447 subjects participated in this study making the response rate of 97%. Approximately 60% (N=265) of the population was under the age of 30 while 33.8% (N=151) were in the age group of 30-49 years and only 6.9% (N=31) were in the age group of 50-69 years. Majority of the participants were female (61%, N=274). Almost three fourth of the participants (N=329) were graduate followed by 20.8% who were secondary educated and 4% who were technically educated. Only 1.4% (N=7) of the participants were primary educated. Only a small percentage of the participants (23.4%) worked in health care, while the remaining 34% were students. Nearly 57% of those surveyed were married, 40% were single, and a few were divorced or widowed. Eastern province was home to nearly 43% of the population. In sum, 88% have no prior experience with mental illness, and approximately 32% have provided care to a mentally ill individual. The details of socio demographic characteristics are shown in Table 1.

In the sphere of social restrictiveness, 29% of respondents were neutral when asked if the mentally ill should be given no responsibility. However, 38% disagreed that mentally ill people should be separated from the rest of society. More than half of them strongly agreed with the statement that the mentally ill should not be denied their individual rights. However, 45.4% agreed that mental patients should be encouraged to assume the responsibilities of normal life. 44% of the participants were in favor that no one has the right to exclude the mentally ill from their neighborhood, whereas 40% strongly disagreed that

**Table 1: Socio-demographic characteristics (n=447).**

Variables	Frequency	Percentage
<b>Age groups (in years)</b>		
18-29	265	59.3
30-49	151	33.8
50-69	31	6.9
<b>Gender distribution</b>		
Female	274	61.3
Male	173	38.7
<b>Educational level</b>		
Primary	7	1.6
Secondary	93	20.8
Technical	18	4
University	329	73.6
<b>Occupations</b>		
Employee	103	23
Free lancer	19	4.3
<b>Health Care Employee</b>	60	23.4
Retired	19	4.3
Student	154	34.5
Unemployed	92	20.6
<b>Marital Status</b>		
Divorced	10	2.2
Married	257	57.5
Single	178	39.8
Widow	2	0.4
<b>Area of living</b>		
The Eastern Sector	194	43.4
The Middle Sector	154	34.5
The Northern Sector	77	17.2
The Southern Sector	22	4.9
<b>Experienced a mental illness</b>		
No	394	88.1
Yes	53	11.9
<b>Shared in giving care to a mentally ill person</b>		
No	302	67.6
Yes	145	32.4

most women who were once patients in a mental hospital can be trusted as babysitters. The second domain in authoritarianism, 52.3% agreed that one of the main causes of mental illness is a lack of self-discipline and will power, while 58.2% strongly disagree that the best way to handle the mentally ill is to keep them behind locked doors. Nearly 43% strongly agreed 44% agreed that the mentally ill should not be treated as outcasts of society and 47.4% in favor of virtually anyone can become mentally ill. In benevolence domains, nearly 50% overall agree that the mentally ill have for too long been the subject of ridicule. Overall 90% approved that more tax money should be spent on the care and treatment of the mentally ill. Out of total, 50% in favor and 30% were neutral that we need to adopt a far more tolerant attitude toward the mentally ill in our society. Overall 90% agreed that we have a responsibility to provide the best possible care for the mentally ill. Whereas, 65% strongly disagree and disagree that the mentally ill don't deserve our sympathy. Out of total, 83% strongly disagree and disagree that the mentally ill are a burden on society Increased spending on mental health services is a waste of tax dollars. While 50% did not approve that it is best to avoid anyone who has mental

problems. In the last domain that is community mental health ideology, 68% stated that residents should accept the location of mental health facilities in their neighborhood to serve the needs of the local community, while 75% agreed that the best therapy for many mental patients is to be part of a normal community. Overall, 85% approved that as far as possible, mental health services should be provided through community based facilities. Out of all respondents, 40% were strongly disagree and disagree that locating mental health facilities in a residential

area downgrades the neighborhood. The details of the responses on the questionnaires on social restrictiveness, authoritarianism, benevolence, and community mental health ideology is shown in Table 2. Based on the total scores of CAMI scale, 25th and 75th percentile was considered as cut off points for low and high score. A higher score of public stigmas toward mental illness was found in 50.31% of the participants. The mean scores for all the scales and subscales were as follows: CAMI (124.98 ±

**Table 2: Responses for four sub-classes (n=447).**

Four sub-classes	Responses (%)				
	SD	D	N	A	SA
<b>Social restrictiveness</b>					
The mentally ill should not be given any responsibility	63(14.1)	139(31.1)	129(28.9)	78(17.4)	38(8.5)
The mentally ill should be isolated from the rest of the community	173(38.7)	170(38)	69(15.4)	24(5.4)	11(2.5)
A woman would be foolish to marry a man who has suffered from mental illness, even though he seems fully recovered	128(28.6)	169(37.8)	101(22.6)	30(6.7)	19(22.6)
I would not want to live next door to someone who has been mentally ill	91(20.4)	153(34.2)	139(31.1)	47(10.5)	17(3.8)
Anyone with a history of mental problems should be excluded from taking public office	72(16.1)	90(20.1)	118(26.4)	120(26.8)	47(10.5)
The mentally ill should not be denied their individual rights	28(6.3)	17(3.8)	21(4.7)	147(32.9)	234(52.3)
Mental patients should be encouraged to assume the responsibilities of normal life	18(4.0)	14(3.1)	43(9.6)	203(45.4)	169(37.8)
No one has the right to exclude the mentally ill from their neighborhood	31(6.9)	30(6.7)	42(9.4)	197(44.1)	147(32.9)
The mentally ill are far less of a danger than most people suppose	17 (3.8)	54(12.1)	146(32.7)	181(40.5)	49(11.0)
Most women who were once patients in a mental hospital can be trusted as babysitters Authoritarianism (AU)	40(8.9)	111(24.8)	192(43.0)	84(18.8)	20(4.5)
One of the main causes of mental illness is a lack of self-discipline and will power.	19(4.3)	33(7.4)	105(23.5)	232(51.9)	58(13)
The best way to handle the mentally ill is to keep them behind locked doors	260(58.2)	121(27.1)	43(9.6)	16(3.6)	7(1.6)
There is something about the mentally ill that makes it easy to tell them from normal people	37(8.3)	77(17.2)	163(36.5)	149(33.3)	21(4.7)
As soon as a person shows signs of mental disturbance, he should be hospitalized	48(10.7)	113(25.3)	103(23)	140(31.3)	43(9.6)
Mental patients need the same kind of control and discipline as a young child	22(4.9)	85(19)	142(31.8)	152(34)	46(10.3)
Mental illness is an illness like any other	43(9.6)	83(18.6)	70(15.7)	142(31.8)	109(24.4)
The mentally ill should not be treated as outcasts of society	20(4.5)	12(2.7)	27(6.0)	196(43.8)	192(43)
Less emphasis should be placed on protecting the public from the mentally ill	25(5.6)	47(10.5)	122(27.3)	201(45)	52(11.6)
Mental hospitals are an outdated means of treating the mentally ill	79(17.7)	138(30.9)	124(27.7)	83(18.6)	23(5.1)
Virtually anyone can become mentally ill benevolence	15(3.4)	11(2.5)	68(15.2)	212(47.4)	141(31.5)
The mentally ill have for too long been the subject of ridicule	64(14.3)	58(13)	104(23.3)	174(38.9)	47(10.5)
More tax money should be spent on the care and treatment of the mentally ill	13(2.9)	10(2.2)	37(8.3)	172(38.5)	215(48.1)
We need to adopt a far more tolerant attitude toward the mentally ill in our society	23(5.1)	61(13.6)	134(30)	172(38.5)	57(12.8)
Our mental hospitals seem more like prisons than like places where the mentally ill can be cared for	52(11.6)	69(15.4)	134(30)	120(26.8)	72(16.1)
We have a responsibility to provide the best possible care for the mentally ill	13(2.9)	10(2.2)	37(8.3)	172(38.5)	215(48.1)
The mentally ill don't deserve our sympathy	160(35.8)	145(32.4)	92(20.6)	38(8.5)	12(2.7)
The mentally ill are a burden on society Increased spending on mental health services is a waste of tax dollars	230(51.5)	145(32.4)	44(9.8)	20(4.5)	08(1.8)
There are sufficient existing services for the mentally ill	65(14.5)	144(32.2)	138(30.9)	83(18.6)	17(3.8)
It is best to avoid anyone who has mental problems	119(26.6)	150(33.6)	116(26)	52(11.6)	10(2.2)
Most women who were once patients in a mental hospital can be trusted as babysitters Community mental health ideology	164 (36.7)	181(40.5)	64(14.3)	21(4.7)	17(3.8)
Residents should accept the location of mental health facilities in their neighborhood to serve the needs of the local community	13(2.9)	21(4.7)	109(24.4)	198(44.3)	106(23.7)
The best therapy for many mental patients is to be part of a normal community	16(3.6)	25(5.6)	72(16.1)	246(55)	88(19.7)

As far as possible, mental health services should be provided through community based facilities	13(2.9)	11(2.5)	38(8.5)	186(41.6)	199(44.5)
Locating mental health services in residential neighborhoods does not endanger local residents	18(4.0)	58(13)	148(33.1)	160(35.8)	63(14.1)
Mental health facilities should be kept out of residential neighborhoods	54(12.1)	136(30.4)	144(32.2)	87(19.5)	26(5.8)
Local residents have good reason to resist the location of mental health services in their neighborhood	35(7.8)	75(16.8)	209(46.8)	107(23.9)	21(4.7)
Having mental patients living within residential neighborhoods might be good therapy but the risks to residents are too great	36(8.1)	76(17)	176(39)	136(30.4)	23(5.1)
It is frightening to think of people with mental problems living in residential neighborhoods	48(10.7)	132(29.5)	152(34)	94(21)	20(4.5)
Locating mental health facilities in a residential area downgrades the neighborhood	58(13.0)	131(29.3)	161(36)	73(16.3)	23(5.1)

**Table 3: Descriptive analysis of four domains (n=447).**

Domains	Mean (SD)	Median	95% C.I	
			Lower bound	Upper bound
Social restrictiveness (SR)	30.83 (±4.06)	31	30.45	31.21
Authoritarianism (AU)	32.50 (±4.00)	33	32.11	32.89
Benevolence (BE)	28.68 (±3.27)	29	28.37	28.74
Community mental health ideology (CMHI)	32.97 (±4.26)	33	32.57	33.36

**Table 4: Association of socio-demographic characteristics with experience dealing with mentally ill (n=447).**

Variables	B	SE	Wald	DF	Sig.	Exp (B)
Age	0.233	0.265	0.769	1	0.381	1.262
Gender	-0.621	0.337	3.392	1	0.066	0.537
Educational Level	-0.203	0.158	1.648	1	0.199	0.816
Career	-0.061	0.099	0.376	1	0.54	0.941
Marital Status	-0.02	0.32	0.004	1	0.95	0.98
Residency	-0.025	0.14	0.031	1	0.859	0.976
Constant	-0.481	1.225	0.154	1	0.695	0.618

**Table 5: Effects socioeconomic variables on attitudes toward the mentally ill (n=447).**

Socio-demographic variables		Social restrictiveness domain				
		Sum of Squares	Degree of freedom	Mean Square	F	P-Value
Age Groups	Between groups	18.8	26	0.723	1.963	0.004
	Within groups	154.704	420	0.368		
Gender	Between groups	4.606	26	0.177	0.733	0.829
	Within groups	101.439	420	0.242		
Educational Level	Between groups	29.866	26	1.149	1.557	0.141
	Within groups	309.879	420	0.738		
Occupations	Between groups	75.378	26	2.899	1.013	0.449
	Within groups	1202.587	420	2.863		
Area of Living	Between groups	36.31	26	1.397	1.205	0.226
	Within groups	486.965	420	1.159		
Marital Status	Between groups	11.787	26	0.453	1.535	0.047
	Within groups	124.043	420	0.295		

15.59), SR (30.83 ± 4.06), AU (32.50 ± 4.0), BE (28.68 ± 3.27) and CMHI (32.97 ± 4.26). The detailed descriptive analysis of all four domains is shown in the Table 3.

There was no association (p>0.05) between having experience working with mentally ill patients and any socio-demographic variables. The link between working with mentally ill patients and socio-demographic features is seen in Table 4. Age groups

and marital status had a significant association (<0.05) with the attitude towards mentally ill patients. Other demographic characteristics, on the other hand, exhibit no meaningful correlation. The details of association between socio demography and attitude are shown in Table 5.

Only one variable that is age groups had significant association (<0.05) in answers of authoritarianism domain. Though, other

demographic variables do not have any significant association. This details of an association in different socio demographic variables and authoritarianism domain is shown in Table 6.

Only one variable, age groups, had a significant connection

(<0.05) between socio demographic characteristics and the benevolence. Other demographic characteristics, on the other hand, exhibit no meaningful association. The details of the association between demographic characteristics and

**Table 6: Authoritarianism domain.**

Socio-demographic variables		Sum of squares	Degree of freedom	Mean square	F	P-value
Age Groups	Between groups	24.128	30	0.804	2.24	0
	Within groups	149.375	416	0.359		
Gender	Between groups	7.59	30	0.253	1.069	0.371
	Within groups	98.454	416	0.237		
Educational Level	Between groups	28.952	30	0.965	1.292	0.143
	Within groups	310.793	416	0.747		
Occupations	Between groups	44.264	30	1.475	0.498	0.989
	Within groups	1233.701	416	2.966		
Area of Living	Between groups	37.079	30	1.236	1.058	0.387
	Within groups	486.196	416	1.169		
Marital Status	Between groups	11.238	30	0.375	1.251	0.174
	Within groups	124.592	416	0.299		

**Table 7: Benevolence domain.**

Socio-demographic variables		Sum of squares	Degree of freedom	Mean square	F	P-value
Age groups	Between groups	13.267	22	0.603	1.596	0.044
	Within groups	160.236	424	0.378		
Gender	Between groups	4.334	22	0.197	0.821	0.7
	Within groups	101.711	424	0.24		
Educational level	Between groups	22.298	22	1.014	1.354	0.132
	Within groups	317.447	424	0.749		
Occupations	Between groups	87.078	22	3.958	1.409	0.104
	Within groups	1190.886	424	2.809		
Area of living	Between groups	26.887	22	1.222	1.044	0.408
	Within groups	496.389	424	1.171		
Marital status	Between groups	13.838	22	0.629	2.186	0.002
	Within groups	121.992	424	0.288		

**Table 8: Community mental health ideology domain.**

Socio-demographic variables		Sum of squares	Degree of freedom	Mean square	F	P-value
Age groups	Between groups	12.587	28	0.45	1.168	0.257
	Within groups	160.916	418	0.385		
Gender	Between groups	5.796	28	0.207	0.863	0.67
	Within groups	100.249	418	0.24		
Educational level	Between groups	23.946	28	0.855	1.132	0.296
	Within groups	315.799	418	0.756		
Occupations	Between groups	69.47	28	2.481	0.858	0.677
	Within groups	1208.494	418	2.891		
Area of living	Between groups	31.04	28	1.109	0.941	0.554
	Within groups	492.235	418	1.178		
Marital status	Between groups	10.45	28	0.373	1.244	0.185
	Within groups	125.38	418	0.3		

benevolence are shown in Table 7.

As far as community mental health ideology domain is concerned, only one variable that is age groups had significant association ( $<0.05$ ). Though, other demographic variables did not have any significant association. The details of the association of demographic characteristics and community mental health ideology domain is shown in Table 8.

## Discussion

The present study was conducted to estimate the attitude of the Saudi population towards the mentally ill patients. The result of the present study has shown a moderate prevalence of stigma toward mental illness among the Saudi population of Al Ahsa region of Saudi Arabia. A Similar national Lebanese study<sup>[18]</sup> has shown a higher score of public stigma among 67.8% of the participants toward mental ill patients. However, in our study 50.31% of the participants showed higher score of stigma towards mental illness. One other Saudi study has shown that two-thirds (66.5%) of the participants reported negative attitudes toward mentally ill patients with an overall percentage attitude score of  $65.86 \pm 7.77$ .<sup>[15]</sup> In contrast, an Indian study has shown community attitude toward patient with mental illness was kind and non-stigmatizing.<sup>[19]</sup> The score achieved by the participants on the four subscales of attitude (SR ( $30.83 \pm 4.06$ ), AU ( $32.50 \pm 4.0$ ), BE ( $28.68 \pm 3.27$ ) and CMHI ( $32.97 \pm 4.26$ )) has shown a comparatively less negative attitude towards mentally ill patients. A similar study conducted on the Kuwaiti nurses has revealed the nurses' negative attitude toward mentally ill patients. Their score on Authoritarian subscale (mean= 2.85; SD=0.38) was found to be on relatively higher side suggesting that they may have been regarding the mentally ill patients as being somewhat inferior. Similarly, they scored higher on social restrictive subscale (Mean  $2.97 \pm 0.39$ ) suggesting disapproval of the mentally ill residing in the immediate neighborhood. The nurses scored lower on "benevolence" subscale score (Mean  $3.66 \pm 0.46$ ) indicating that they may harbor less sympathetic views of those experiencing mental health problems. The "CMHI" subscale score of the participant's nurses was again on the lower side (Mean  $3.48 \pm 0.43$ ) suggesting their reluctance to accept the presence of the mentally ill in the neighborhood.<sup>[20]</sup> Winkler et al. in a research on the general population and medical doctors of Czech Republic has also found a high stigmatizing attitude towards the mentally ill patients. As compared to the general population medical doctors demonstrated less stigmatizing attitudes toward people with mental illness in 26 of the 27 CAMI items as well as in the total CAMI score in this study. A Korean study has shown an overall mean scores of all participants assessed by the CAMI subscales as  $23.9 \pm 3.6$  for AU:  $37.2 \pm 3.7$  for BE:  $27.0 \pm 4.8$  for SR, and  $33.7 \pm 4.0$  for CMHI. This study was done on the community health workers, administrative officers who register mentally ill patients, and health centers staff who provide services such as vaccination or medical treatment for low-income groups. Community welfare center workers showed more authoritative attitudes than workers in the other two institutions ( $P<0.001$ ) and more strongly favored restricting the social functions of the mentally ill ( $P<0.001$ ). At the same time, they had more negative beliefs about CMHI ( $P<0.001$ ).

Unlike Ghana study, in which a majority of participants (57.1%) rejected the view that mental illness is an illness like any other (AU6), only 43.9% of the participants disagreed with this statement in the present study. However, like Ghana study (61.2%), the majority of the participants (64.9%) in our study considered mental illness as a consequence of lack of self-discipline and will power (AU1). In contrast to the general believe by 79.7% of the Ghana participants that it is easy to tell persons with mental illness from 'normal' people, only 38% of the participants in our study agreed with this statement. This positive attitude which extended to potential marriage with only 27.6% agreeing that it would be foolish for a woman to marry a man who has suffered from mental illness in Ghana study in an Indian study also 52.2% of the participants believed that a woman would be foolish to marry a man who has suffered from mental illness even though he seems fully recovered. However, our study has shown that a vast majority of the participants (89%) disagreed with this view. On Social restrictiveness questionnaire 54.6% of the Ghana participants assented to the statement that no one has the right to exclude the mentally ill from their neighborhood while our study has shown a better attitude of participants where 77% of the participants agreed on it and so the Indian study which showed a good response on integration with 77.4% saying that residents have nothing to fear from people coming into their neighborhood to obtain mental health services. In Ghana study 42.1% of the participants believed that the mentally ill should be isolated from the community and 39.7% agreed with the view that they would not want to live next door to someone who has been mentally ill, which contrasts with our study where an overwhelming majority (92.1%) of the participants disagreed on isolating mentally ill patients and only 14.3% of the participants disagreed to live next door to mentally sick patient. In Indian study also 94.9% of the participants said that they were willing to live with a people with mental illness.

The Ghana study has also shown that 50.7%-54.8% of the participants thought that the risks of mental patients living within residential neighborhoods are too great but the present study showed that only 21.4% of the participants agreed this view. However, locating mental health services in residential areas was not regarded as dangerous by 76.9%-80.0% of the respondents in Ghana study which contrasted with our study where almost 50% of the participants regarded it to be dangerous. In general, 72.4% of the participants of Ghana study felt that mentally ill persons deserve sympathy compared to 88.8% in the present study.

One South African study conducted on no specialist doctors has also shown that 50% of the participants had a positive attitude towards mental illness. However there were no significant associations between attitude and socio-demographic characteristics in this study. Our study has shown a significant association ( $P<0.05$ ) between age groups and marital status with the attitude towards mentally ill patients. Ravi et al. in their study have found a significant positive attitude among the nursing students towards mental illness in five of the six attitudes factors: However, in this study the domains with their score were restrictiveness (8.42), benevolence (28.6) and stigmatization (7.3), separatism (15.6) and stereotype (9.4).

These students had negative attitude in pessimistic predictions (12.5) domain as they rated this domain slightly on the higher side. This study did not find any significant correlation between nursing students' attitudes towards mental illness and their age, gender and socio-economic status.

## Conclusion

We presented data on population attitudes towards mental illness in Al-Ahsa district of Saudi Arabia. Unlike many studies, our study showed a comparatively better positive attitude of the population towards mentally ill patients. Half of the studied subjects had negative attitude. The response on the questionnaires on different subsets of attitude showed that the population' attitude towards mentally sick patients co-existed with more benevolent tendencies such as support by more spending from taxes for their care. However, efforts should be made to address the negative attitude of the population by anti-stigma program. There is a need to build more benevolent attitudes. This can be achieved by improvements in the educational sector and increased literacy.

## Acknowledgments

A special thanks to Zahraa Baqer Alali, a fifth-year medical student of King Faisal University who participated in data collection.

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