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Knowledge and attitude toward mental illness among the population at King Faisal University, Saudi Arabia

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A – Study Design, **B** – Data Collection, **C** – Statistical Analysis, **D** – Data Interpretation, **E** – Manuscript Preparation, **F** – Literature Search, **G** – Funds Collection

Summary **Background.** Mental disorders are considered a significant public health problem, posing a great burden worldwide.
Objectives. This study aimed to evaluate socio-demographic characteristics, perceptions of mental illness aetiology and attitudes toward patients, care and mental illness management.
Material and methods. This was a comparative cross-sectional study including 1,355 participants from King Faisal University in Al-Ahsa, Eastern Region, Saudi Arabia. A survey gathered information on perceptions and attitudes regarding the aetiology of mental illness, mental health management and patients with mental illness.
Results. A total of 52% of participants had previous contact with a mentally ill person. Only 14% thought mental illness could be ascribed to God's punishment on Earth. Thus, participants showed adequate knowledge of mental disorder aetiology. Nearly 80% of participants reported positive perceptions of people with mental illness. While 35% had negative perceptions of people with mental issues, a vast majority (82%) showed some positive attitudes towards mental illnesses. Female, unmarried and urban participants were significantly associated with higher attitude scores. Following multiple linear regression analysis between attitude scores and significant variables from the bivariate analysis, gender, residence and marital status remained significant (p = 0.006, p = 0.002, and p = 0.023, respectively).
Conclusions. Further investigation is needed to reassess the prevalence of mental disorders. Most participants showed adequate knowledge regarding the aetiology of mental disorders, as well as some positive attitudes. Health education campaigns are needed to rectify the inaccurate beliefs and negative attitudes that were detected in this study.
Key words: awareness, approach, mental health, Saudi Arabia.

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Background

Mental disorders are considered a major and ongoing public health concern affecting many countries around the world. For example, depression is a leading cause of disability worldwide, with more than 264 million people suffering from depression [1]. In the case of Saudi Arabia, the prevalence of mental disorders is not well documented. As reported in a previous study [2], mental health disorders accounted for 28.5% of adult patients visiting primary health care centres in Saudi Arabia. Although most mental illnesses can be treated in low- and middle-income countries, between 76% and 85% of patients with mental disorders do not receive treatment [3].

One of the major causes of the underutilisation of mental health care appears to be stigma, which restricts patients from seeking help from medical professionals and other services offered at the state and private levels [4]. An additional cause is that many patients with mental disorders seem to turn to traditional healers before consulting their doctors [5]. Globally, patients with mental disorders tend to feel stigmatised by negative societal attitudes, impacting their decisions regarding seeking help, being diagnosed and receiving treatment [6]. Barriers to treatment due to stigma can, in turn, lead to significant spikes in morbidity among patients with mental disorders, thus affecting their quality of life [7]. Many efforts have been made to decrease the stigma regarding mental health issues, primarily through public education in schools and in the media [8].

Stigma in the context of mental illness is defined as negative beliefs and attitudes that stimulate the public to fear, reject and avoid people with mental disorders [9]. It was found that stigma can cause a loss of confidence and self-efficacy in patients with mental illness, due to the commonly held negative belief that patients will never be able to recover [10]. Approximately 24% of young people have reported believing that people with mental illness are dangerous, while 39% consider them unbalanced [11]. Other common beliefs regarding mentally ill patients include the views that they are to blame for their illness and that they are incompetent and dangerous [12]. In Saudi Arabia, a recently published study showed a lack of knowledge and negative perceptions and attitudes toward seeking professional help and mental illnesses [13]. Another recent study showed that 31% of nonpsychiatric health care professionals lacked adequate knowledge, and approximately 45% had negative attitudes toward patients [14]. An interesting study carried out in Saudi Arabia in 2020 to assess knowledge and attitudes among health and non-health university students showed that 52% of students had a positive attitude toward mental illness, though only 13% had adequate knowledge [15]. The study by Mahmoud found that 87% of participants were ignorant of the mental health services available in Saudi Arabia, 85% reported that social factors were the main cause of mental disorders, approximately 25% stated that they would not seek help if needed, and approximately 50% felt ashamed about having a mental illness [16].

Objectives

This study was conducted to evaluate the knowledge level and attitudes regarding mental illnesses among students and faculty at King Faisal University.

Material and methods

This study was a comparative cross-sectional study. It was conducted at King Faisal University, Saudi Arabia, from 20 December 2020 to 20 January 2021 (one month). All employees and students at King Faisal University were assessed, with a total of 1,355 responses.

Study instrument

An electronic database search was carried out using Google Scholar to gather background information and determine the knowledge gap. Data was collected using a Google Form in Arabic language to increase the response rate. A pilot study was conducted to ensure the clarity of the questionnaire and to elucidate any ambiguities. The questionnaire had already been adopted in previous studies in several Arab countries [17]. The questionnaire comprised four components, with the first portion gauging socio-demographic characteristics. The second portion assessed the aetiology and perception of mental illness. The third part evaluated attitudes toward patients with mental illness. Finally, the fourth part evaluated the care and management of people with mental illness. The third and fourth parts used 3-point Likert scales (agree [1 point], neutral [2 points], disagree [3 points]). Negative statements were scored in reverse. Attitude scores were categorised as positive, neutral and negative; scores were defined as positive if they were at least 75% of the maximum score (40.5–54 points), neutral if they were between 50% and 74% (27–40.5 points) and poor if they were less than 50% (less than 27 points). Participants were stratified according to gender, age, residence, education and previous contact with a person with mental illness.

Statistical analysis

Data was analysed using the Statistical Package for the Social Sciences (SPSS), version 25. Cronbach's alpha for the reliability of the attitude questions was 0.683. Categorical variables were presented as numbers and percentages, and scale variables were presented as means and standard deviation. Categorical variables were compared using the Chi-square test, while scale variables were compared using the student's *t*-Test and one-way analysis of variance. Multiple linear regression analysis was performed. All tests were 2-tailed, and a p-value of < 0.05 was considered statistically significant.

Sample size calculation

The sample size was determined by the Richard Geiger equation with a margin of error of 5% and a confidence of 95%. The population size was 17,000 subjects. A calculated sample of 600 subjects would provide a margin of error of 5% from the true values at a 95% confidence level. The total number of respondents was then increased by 50% to guard against non-respondents and increase the confidence level. The estimated sample size was thus 1,300 subjects.

Ethical consideration

The Ethical Committee of the Faculty of Medicine, King Faisal University, approved this research (reference number: 72-10-2020). At the beginning of the survey, the study's nature was explained, and the participants were informed that answering this questionnaire implied their consent that the information and data would be used for the purpose of research.

Results

The socio-demographic characteristics of respondents are shown in Table 1. More than half of the participants had previous contact with a person with mental illness. Approximately 91% of participants agreed that a serious incident involving the person could be the cause of mental disorders, 66% thought that substance abuse might cause mental disorders, and 63% agreed that personal weakness could be a cause of mental disorders. Brain disease and genetic inheritance were believed to cause mental diseases by approximately 55% and 49% of participants, respectively. Only 14% thought that mental illness is due to divine punishment (Table 2 and Figure 1). Comparisons of knowledge of mental illnesses according to different socio-demographic characteristics are shown in Table 2, with significant differences in bold.

Table 1. Socio-demographic characteristics of respondents (n = 1,355)

Variable	Category	*n*	%
Age	less than 30	1,127	83.2
	30–50	194	14.3
	more than 50	34	2.5
Gender	females	921	68.0
	males	434	32.0
Marital status	widow	10	0.7
	single	1,004	74.1
	married	296	21.8
	divorced	45	3.3
Residence	rural	283	20.9
	urban	1,072	79.1
Education	primary and secondary	103	7.6
	university	1,069	78.9
	diploma	30	2.2
	masters or doctoral	153	11.3
Previous contact with a person with mental illness	no	648	47.8
	yes	707	52.2

All variables are summarised as numbers and percentages.

Nearly 80% of participants had a positive perception of people with mental diseases (people with mental illness are capable of working, and anyone can develop a mental disease). In contrast, approximately 35% had a negative perspective of people with mental illness (they can be judged by their physical appearance, they are not capable of true friendship, and they are usually dangerous). 78% agreed that people with mental health problems are largely to blame for their condition (Table 3, Figure 2).

A large majority of participants (70% and 78%, respectively) agreed that they could maintain a friendship with someone with mental illness and that people with mental illness should have the same rights. Similarly, more than half (55%) agreed that people are generally caring and sympathetic toward people with mental illnesses. Only 29%, however, reported that they could marry someone with a mental illness. Less than 30% agreed with most negative attitudes, except the attitude that they would not want people to know if they had a mental illness, which was reported by 58% of participants (Table 4).

Regarding attitudes toward the care and treatment of people with a mental illness, a large majority of participants (85%) confirmed that mental health issues could be treated outside a hospital. In fact, 68% asserted that most people with a mental health problem could recover. More than half (64%) agreed that they would feel comfortable discussing their own or a family member's mental health issue with someone in primary health care (PHC). It should be noted that less than 17% of participants reported negative attitudes. Approximately 49% confirmed that mental health services are available in their community. While 31% agreed that PHC clinics could provide adequate care for mental illnesses, only 25% agreed that mental illness information is available at their PHC (Table 4, Figure 3).

Table 2. Respondents' views on aetiology of mental illness, by gender, age, residence, education and contact (*n* = 1,355)

Variable	Category	Total (*n* = 1,355)	Gender		*p*	Age			*p*
			Female (*n* = 921)	Male (*n* = 434)		< 30 (*n* = 1,127)	30–50 (*n* = 194)	> 50 (*n* = 34)	
Mental illness is caused by:									
Genetic inheritance	disagree	39	40	37	0.042	40	29	50	0.006
	neutral	12	11	16		13	10	12	
	agree	49	50	47		47	61	38	
Substance abuse	disagree	27	26	29	0.560	26	34	29	0.247
	neutral	7	7	7		8	6	9	
	agree	66	67	64		67	60	62	
Bad things happening to the person	disagree	4	4	4	0.150	4	6	6	0.009
	neutral	5	4	6		5	2	15	
	agree	91	92	90		91	92	79	
God's punishment	disagree	72	77	61	< 0.001	71	78	71	0.371
	neutral	15	12	20		15	11	18	
	agree	14	11	19		14	11	12	
Brain disease	disagree	30	32	25	0.005	29	34	26	0.281
	neutral	15	13	19		16	10	18	
	agree	55	55	55		55	56	56	
Personal weakness	disagree	21	23	19	< 0.001	22	18	15	0.114
	neutral	15	12	21		15	11	24	
	agree	63	65	60		62	71	62	

Variable	Category	Residence		*p*	Educational level		*p*	Contact with mental illness		*p*
		Rural (*n* = 283)	Urban (*n* = 1072)		Diploma (*n* = 30)	Masters or doctoral (*n* = 153)		No (*n* = 648)	Yes (*n* = 707)	
Mental illness is caused by:										
Genetic inheritance	disagree	33	40	0.093	40	32	0.484	38	40	0.111
	neutral	14	12		10	7		14	11	
	agree	53	48		50	61		48	50	
Substance abuse	disagree	20	29	0.023	17	26	0.473	18	35	< 0.001
	neutral	8	7		7	8		7	7	
	agree	71	64		77	65		74	58	
Bad things happening to the person	disagree	5	4	0.005	13	4	0.071	3	5	0.424
	neutral	8	4		7	3		5	5	
	agree	87	92		80	93		92	91	
God's punishment	disagree	65	74	0.015	70	76	0.778	68	76	0.003
	neutral	18	14		17	14		17	12	
	agree	17	13		13	10		16	12	
Brain disease	disagree	25	31	0.165	30	29	0.167	27	32	0.01
	neutral	16	15		23	11		18	13	
	agree	59	54		47	59		55	55	
Personal weakness	disagree	20	22	0.019	20	18	0.106	20	23	0.207
	neutral	10	16		20	8		16	14	
	agree	70	62		60	74		64	63	

All variables are summarised as percentages; a Chi-square test was used; significant differences are in bold ($p < 0.05$).

In contrast to the majority of participants (82%) who had positive attitudes toward mental health issues, approximately 18% showed a comparatively neutral attitude, and no participants reported negative attitudes (Figure 4).

Comparing mean attitude scores according to participants' socio-demographic characteristics, gender, marital status and residence showed significant differences ($p = 0.007$, $p = 0.033$, and $p = 0.003$, respectively). The mean attitude scores were higher among females than males, unmarried participants than married participants, and urban dwellers than rural dwellers (45.85 versus 44.98, 45.75 versus 44.98, and 45.8 versus 44.7, respectively) (Table 5). After performing multiple linear regression analysis between attitude scores and significant variables from bivariate analysis, gender, residence and marital status remained significant ($p = 0.006$, $p = 0.002$, and $p = 0.023$, respectively). The variance explained by each variable was 1.6% (Table 6).

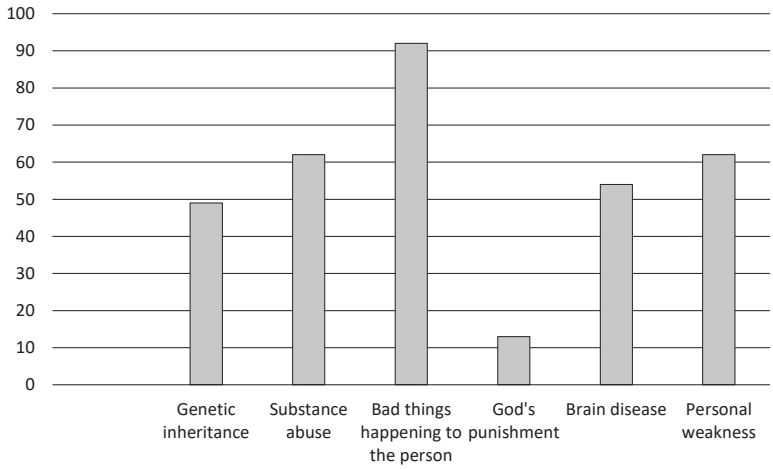

Figure 1. Percentage of agreement with the aetiology of mental illness (*n* = 1,355)

Table 3. Respondents' views on perception of mental illness (*n* = 1,355)		
Positive perception	**Category**	**%**
Capable to work	disagree	10
	neutral	12
	agree	78
Anyone can have mental illness	disagree	8
	neutral	9
	agree	83
Negative perception	**category**	**%**
Blame for own condition	disagree	8
	neutral	13
	agree	78
Tell by physical appearance	disagree	50
	neutral	13
	agree	36
Not capable of true friendship	disagree	48
	neutral	16
	agree	36
Usually dangerous	disagree	50
	neutral	15
	agree	35

All variables are summarised as percentages.

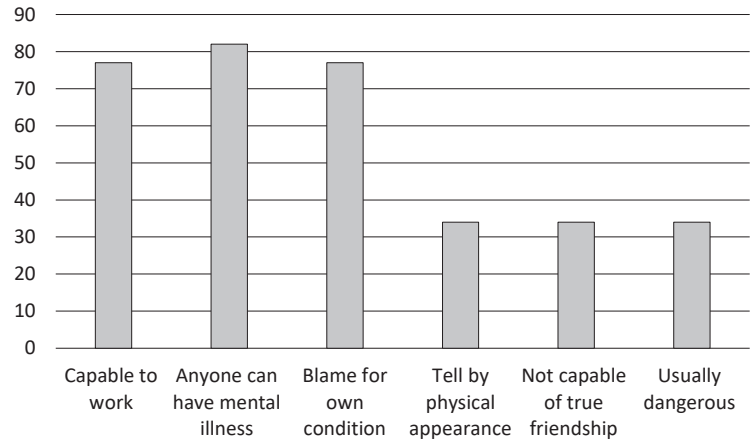

Figure 2. Percentage of agreement with perceptions of people with mental illness (*n* = 1,355)

Table 4. Attitude towards patients, care and treatment of people with mental illness (*n* = 1,355)			
	Agree	**Neutral**	**Disagree**
Attitude towards people with mental illness			
Negative attitudes			
Should be prevented from having children	29	11	60
Should not get married	29	11	61
One should avoid all contact with the mentally ill	14	12	75

Table 4. Attitude towards patients, care and treatment of people with mental illness (*n* = 1,355)			
	Agree	**Neutral**	**Disagree**
Attitude towards people with mental illness			
Should not be allowed to make decisions	18	13	69
I would be afraid to have conversation with a mentally ill person	29	23	48
I would be upset working the same job as a mentally ill person	16	22	62
Ashamed if a family member was diagnosed with mental illness	14	13	73
I would not want people to know if I suffered from mental illness	58	17	25
Positive attitude			
I could maintain a friendship with someone with mental illness	70	19	11
Person with mental illness should have the same rights	78	10	12
I could marry someone with mental illness	29	17	55
People are generally caring and sympathetic towards people with mental illness	55	15	30
Attitudes towards care and treatment of people with mental illness			
Negative attitudes			
Should hide mental illness from family	10	7	84
Mental illness cannot be cured	11	5	83
Mentally ill people should be in an institution to be under supervision and control	17	8	75
Positive attitudes			
Mental illness can be treated outside a hospital	85	7	8
The majority of people with mental illnesses recover	68	20	12
I would feel comfortable discussing the mental health issue of a family member or myself with someone at PHC	64	23	12
Mental health service availability			
Information about mental illness is available at my PHC	45	30	25
PHC clinics can provide good care for mental illnesses	30	40	31
Mental health services are available in my community	34	18	49

All variables are summarised as percentages; a Chi-square test was used; significant differences are in bold ($p < 0.05$).

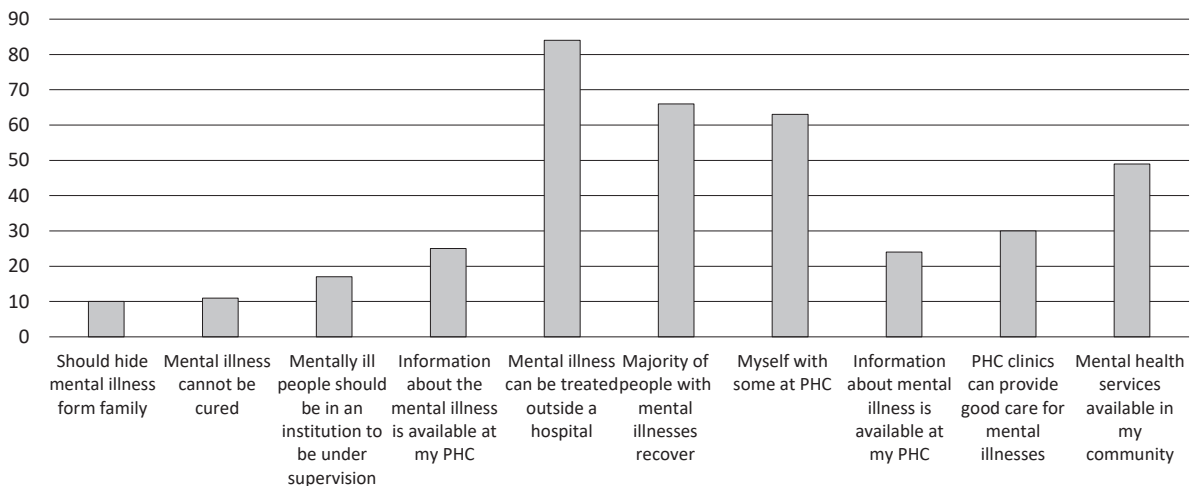

Figure 3. Percentage of agreement with attitudes toward care and treatment of people with mental illnesses (*n* = 1,355)

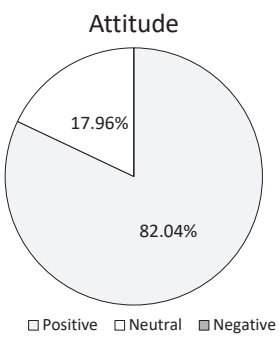

Figure 4. Participants' attitudes toward mental illness (*n* = 1,355)

Table 5. Mean attitude score according to the socio-demographic characteristics of participants (n = 1,355)				
Variable category		**Mean**	**Standard deviation**	***p***
Age	less than 30	45.70	5.43	0.300
	30–50	44.98	5.42	
	more than 50	45.00	6.09	
Gender	females	45.85	5.44	0.007
	males	44.98	5.44	
Marital status	unmarried	45.75	5.43	0.033
	married	44.98	5.49	
Residence	rural	44.70	5.74	0.003
	urban	45.80	5.36	
Previous contact with a person with mental illness	no	45.42	5.22	0.320
	yes	45.72	5.66	
Education	primary and secondary	44.99	5.58	0.870
	university	45.73	5.46	
	diploma	44.55	4.98	
	masters and doctoral	45.09	5.40	

All variables are summarised as means and standard deviation; student's *t*-Test and one-way analysis of variance were used; significant differences are in bold ($p < 0.05$).

Table 6. Multiple linear regression analysis between attitude score and independent variables				
Independent variables	***β***	***p***	**95 CI for *β***	
			lower limit	**upper limit**
Gender	-0.889	0.006	-1.523	-0.255
Residence	1.132	0.002	0.399	1.864
Marital status	-0.816	0.023	-1.522	-0.110
Total R^2 = 0.016				

95% CI – confidence interval; *ß* – unstandardised regression coefficient; R^2 – per cent variance explained by each variable; variable inclusion with $p < 0.05$ and exclusion with $p > 0.10$.

Discussion

This study was a comparative cross-sectional study carried out at King Faisal University with the participation of 1,355 contributors that aimed to assess the knowledge levels and attitudes regarding mental health issues among the population of King Faisal University.

To summarise our findings, participants demonstrated adequate knowledge of the aetiology of mental disorders, and 82% of the surveyed respondents reported positive attitudes toward mental illnesses. Female, unmarried and urban participants were significantly associated with higher attitude scores.

More than half of the participants had previous contact with a person with a mental illness. This may indicate a high prevalence of mental health disorders due to stressful lifestyles, underutilisation of mental health services or stigma toward mental health disorders, which can lead to the underdiagnosis of mental disorders. Though similar results were found in a study carried out in Iraq [17], the present study may need further investigation and research efforts to comprehensively reassess the prevalence of mental disorders.

Our participants had sufficient knowledge of the aetiology of mental disorders, with most of them reporting a number of causes, including negative life events, substance abuse, genetic inheritance and brain diseases, while only 14% reported God's punishment as a cause. However, 63% of participants reported personal weakness as a cause, which may not be accurate. Health education campaigns are thus required to rectify this inaccurate belief.

The majority of participants (approximately 80%) had a positive perception of people with mental issues in terms of their ability to work and the possibility that anyone can develop a mental disease. Nearly 35% had a negative perception of people with mental disorders, stating that they can be identified by their physical appearance, are unable to have true friendships and are perceived as a continuous threat. Consistent with the study by Sadik et al., 78% of participants in this study agreed that people with mental health problems are largely to blame for their condition [17].

The majority of participants (82%) had a positive perception of the issue of mental illness. This may be due to the nature of this study, in which most participants were highly educated university students, similar to a previous study conducted in Saudi Arabia in 2020 [15]. However, our findings are not consistent with a previous study in which all participants described patients with mental illness issues as insane, which is considered a negative attitude and a culturally biased and prejudiced opinion [18]. This inconsistency of results could be ascribed to several factors, including study population and sample. While our study was carried out among university students and employees, the previous study was conducted among members of the general population.

Most of the participants reported positive attitudes that they could maintain a friendship with someone with a mental health issue, that a person with a mental illness should have equal rights and that people are generally caring and sympathetic towards people with mental disorders. However, less than a third agreed that they would marry someone with a mental illness, which may be ascribed to the stigma attached to men-

tal illness or fear of being in contact with a person with mental illness. Less than 30% agreed with statements related to negative attitudes, except that they would not want people to be informed of their own mental illness, which was stated by 58%. This could be due to the fear of stigmatisation of mental illness, which highlights the need for further intervention to empower patients to seek help from medical professionals.

Regarding attitudes toward the care and treatment of people with mental health issues, the majority of the participants had a relatively positive attitude. They reported that mental illness could be treated outside a hospital, that most patients can recover and that they would feel comfortable discussing their own or a family member's mental health issue with someone at a PHC. Only less than a fifth of respondents reported negative attitudes. However, only four participants agreed that information regarding mental illness is available at their PHC, which shows a significant lack of health care resource availability, which should be addressed in future interventions.

The mean attitude score was higher among female, unmarried and urban-dwelling participants. After carrying out multiple linear regression analysis between attitude scores and significant variables from bivariate analysis, gender, residence and marital status remained significant. The same finding regarding gender has been reported in multiple studies [15, 18, 19], a trend that could be attributed to the fact that knowledge of the aetiology among females is higher. As no previous studies have associated attitudes toward mental illness with residence or marital status, further research is needed on these variables.

Limitations of the study

This study was limited in that it was carried out among students and employees of one university, with the majority being students within a specific age group. As such, the findings cannot be generalised to the entire population of Saudi Arabia.

Conclusions

More than half of the participants had previous contact with a person with mental illness. Thus, further investigation is needed to accurately reassess the prevalence of mental disorders. The majority of participants reported good knowledge regarding the aetiology of mental disorders and equally positive attitudes. However, health education campaigns are needed to address a number of commonly held beliefs and negative attitudes detected in this study, including mental illness as God's divine justice inflicted as punishment on the individual. In addition, personal vulnerability or weakness was identified as a cause of mental disorders, people with mental illness were blamed for their condition, and participants were unwilling to disclose their own mental illness to other people or marry people with mental health issues. Information on mental illness should be provided at PHC facilities and is a need that should be addressed in future interventions. Female, unmarried and urban participants were significantly associated with higher attitude scores. Further studies are needed among the general population to assess the effect of different socio-demographic characteristics on knowledge and attitudes regarding mental health issues.

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Conflicts of interest: The authors declare no conflicts of interest.

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Tables: 6
Figures: 4
References: 19

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