

# Mental health literacy among undergraduate students of a Saudi tertiary institution: a cross-sectional study

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## Abstract

The issue of mental health literacy has been widely studied in developed countries, with few studies conducted in Arab countries. In this study we aimed to investigate mental health literacy and attitudes towards psychiatric patients among students of Jazan University, Kingdom of Saudi Arabia. A cross-sectional study was conducted among undergraduate students using a validated Arabic-version questionnaire. A total of 557 students were recruited from different Jazan university colleges. The majority of students (90.3%) have intermediate mental health literacy. Regarding the etiology of mental illness, students agreed that genetic inheritance (45.8%), poor quality of life (65%) and social relationship weakness (73.1%) are the main causes of mental illness. The majority thought that mentally ill people are not capable of true friendships (52.5%) and that anyone can suffer from a mental illness (49.4%). Students' attitudes towards psychiatric patients were mixed, with 68.7% reporting that they could maintain a friendship with a mentally ill person and that people with mental illness should have the same rights as anyone else (82.5%). Mental health literacy among university students was intermediate. There is an urgent need for health educational programs to change the attitudes of students regarding this important health issue.

## Introduction

Mental health literacy is defined as what we know and believe about mental disorders, which help us to recognize, manage, and pre-

vent them.<sup>1</sup> It is only less than two decades since mental health literacy as a public issue began to be researched.<sup>1,2</sup>

Although mental health literacy is important for a healthy life, many researches have documented that inadequate mental health literacy is prevalent and common.<sup>3</sup> People with low health literacy are at risk of both physical and mental diseases. Their health is poor, their hospitalization rates are high, and they incur more care costs than do people with adequate mental health literacy.<sup>4</sup> Low mental health literacy delays patients' help seeking, prevents proper care processes, and increases treatment omission.<sup>4-7</sup> Unfortunately, globally, more than 70% of mentally ill people don't receive any treatment from health organizations.<sup>5</sup>

In the Kingdom of Saudi Arabia (KSA), the prevalence rate of mental illness in patients attending primary health care is high and a study conducted in 2002 stated the prevalence of mental illness to be around 18.2%, which is similar to diabetes prevalence.<sup>8</sup>

Mental health literacy has been largely studied in developed countries,<sup>1,6,9</sup> with few studies conducted in Arab countries.<sup>10</sup> Although relatively many studies have been conducted in Saudi Arabia, literature suggested that there is inadequate mental health literacy in some regions.<sup>2,11-13</sup> To our knowledge, no research on mental health literacy has previously been published in the Jazan region. The main objective of this study is to estimate mental health literacy prevalence among undergraduate students of Jazan University and to assess students' attitudes towards psychiatric patients.

## Materials and Methods

### Study place, design and participants

Jazan University is located in Jazan, southwest of the Kingdom of Saudi Arabia and 70 km from Yemen (south). This was an observational, cross-sectional survey targeted at Jazan University students who registered for the academic year of 2015/2016. The target colleges were Applied Medical Sciences, Pharmacy, Science, Computer Science, and Business Administration.

### Sampling procedures

A sample of 600 participants was estimated for the purpose of this study. The sample size was calculated using the formula for a single cross-sectional survey,  $n = [(z^2 * p * q)]/d^2$ . The sample size was calculated using the following parameters:  $p$  = prevalence of mental health literacy = 50%,  $Z$  = 95% confidence interval,  $d$  = error  $\leq 5\%$ , and a 25% non-

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response rate. The sample was stratified first according to the three sectors, namely health-related faculties, arts faculties, and other scientific faculties. In the second step, two faculties were selected at random from each sector. Probability proportional to size sampling (PPS) was used to determine the number of students in each of the selected faculties.

### Data collection

An Arabic structured questionnaire was used for data collection. The questionnaire was used in a study conducted in Iraq for assessing mental health perception in 2010.<sup>10</sup> The scale's reliability assessment was conducted in another study carried out in India (2015) with a reliability coefficient of 0.85.<sup>14</sup> The first part of the questionnaire covered the socio-demographic details of participants, such as age, gender, college, relation to a person with mental illness, marital status, paternal education level, and family income. The other part of the questionnaire consisted of 30 items that measured mental health literacy of the participants and were distributed as follows: causes of mental illness (six items), students' knowledge of mental illness (five items), attitudes towards psychiatric patients (12 items), and management of people with mental health problems (seven items). The answers were based on a 5-point scale (strongly agree, agree,

neutral, disagree, and strongly disagree).

## Data processing and statistical analysis

The questionnaire papers were verified and entered at home and then merged into one device. The data were analyzed using SPSS ver. 20 (SPSS, Chicago, IL, USA). Descriptive (frequency and percentage) and inferential statistics (chi-square test) were used to interpret the data. An independent sample t-test was used to analyze the difference between the two groups. For statistical purposes, we combined some parts of the questionnaire - *strongly agree* and *agree* - into one category and *disagree* and *strongly disagree* answers into another. For calculating the total scores, each correctly answered item was given five marks for the health literacy part and one mark for the attitudes part. Mental health literacy scores were then classified into three categories, *i.e.* the *Good score* group for respondents with a literacy score of 60-80, the *Intermediate score* group for respondents with a literacy score of 40-60, and the *Poor score* group for respondents with a literacy score below 40. The attitudes score was recoded into two categories: *Positive attitudes* for respondents with an attitude score of 6-12 and *Negative attitudes* for respondents with an attitude score below 6. A P-value <0.05 was con-

sidered statistically significant.

## Results

531 students completed the questionnaires, giving a response rate of 88.5%. Students' age ranged from 18 to 28 years. The mean, median and mode of students' age were 21.5, 21 and 21 years, respectively (SD=1.5), which indicates a fairly even distribution of students' age. Table 1 shows sociodemographic distribution of the study population. Medical students comprised 22.2% (n=118) and non-medical students comprised 77.8% (n=413) of the study population. Health-related colleges included Pharmacy and Applied Medical Sciences. Other science colleges included Science and Computer Science. Arts and Humanities included Business Administration. About 48% of students were male and 52% were female. The majority of students were single (79.4%, n=420), 15.7% (n=83) were married, and 4.9% (n=26) were either divorced or widowed, with two missing values. 36% of mothers and 15.5% of fathers were reported to be illiterate, with only 17.3% of mothers and 32.6% of fathers with university degrees or higher (Table 1).

Sixteen items related to mental health literacy were introduced to each respondent. The

items include etiology of mental illness, perception of people with mental illness, and care and management of people with mental illness. The total scores were computed and classified, as mentioned in the methodology section. Moreover, the overall mean score of mental health literacy was presented. As shown in Table 2, the majority of students (90.3%) have intermediate mental health literacy (overall mean=2.04, SD=0.31). No significant difference was found between mental health literacy of the study participants according to gender or college type (P=0.349 and 0.130 respectively). Table 3 shows the respondents' views on the etiology of mental illness. The findings showed that 45.8% of students agreed with the statement that mental illness is caused by genetic inheritance. More than two thirds (67.8%) considered that most mental illnesses are caused by substance abuse. 65% thought that mental illness might be caused by bad things happening to the person. 44.9% agreed with the statement that mental illness is God's punishment. The majority of students (73.1%) accepted that mental illness might be caused by social relationship weakness. Over half (59.4%) viewed evil eye, magic, demonic possession, and envy as causes of mental illness. The same table shows the respondents' perception of people with mental illness. The majority (85.7%) reported that it is possible to

**Table 1. Selected characteristics of the study participants.**

Characteristics	Gender		Total (n=531) N (%)
	Male (n=255) N (%)	Female (n=276) N (%)	
Age in years			
18-20	39 (15.8)	107 (39.8)	146 (28.3)
20-22	121 (49.0)	112 (41.6)	233 (45.2)
20-22	73 (29.6)	48 (17.8)	121 (23.4)
24-28	14 (5.7)	2 (7)	16 (3.1)
College			
Applied Medical Sci	45 (17.6)	41 (14.9)	86 (16.2)
Pharmacy	13 (5.1)	19 (6.9)	32 (6.0)
Business Admin.	76 (29.8)	97 (35.1)	173 (32.6)
Computer Sciences	54 (21.2)	49 (17.8)	103 (19.4)
Sciences	67 (26.3)	70 (25.4)	137 (25.8)
Marital status			
Married	29 (11.4)	54 (19.6)	83 (15.7)
Single	220 (86.6)	200 (72.7)	420 (79.4)
Divorced	4 (1.6)	15 (5.5)	19 (3.6)
Widowed	1 (4)	6 (2.2)	7 (1.3)
Father's education			
Illiterate	51 (20.1)	31 (11.2)	82 (15.5)
Primary	40 (15.7)	41 (14.9)	81 (15.3)
Intermediate	38 (15.0)	54 (19.6)	92 (17.4)
Secondary	50 (19.7)	52 (18.8)	102 (19.2)
University or higher	75 (29.5)	98 (35.5)	173 (32.6)
Mother's education			
Illiterate	111 (43.5)	80 (29.0)	191 (36.0)
Primary	37 (14.5)	69 (25.0)	106 (20.0)
Intermediate	32 (12.5)	53 (19.2)	85 (16.0)
Secondary	34 (13.3)	23 (8.3)	57 (10.7)
University or higher	41 (16.1)	51 (18.5)	92 (17.3)

tell a mentally ill person by his/her behavior, but over half (53.9%) reported that it is possible to tell a mentally ill person by his/her appearance. Over half (52.5%) thought that mentally ill persons are not capable of true friendships. The majority (82.1%) disagreed that one should hide his/her mental illness from his/her family.

Table 4 compares medical and non-medical students according to their attitudes towards mentally ill patients. Statements were arranged as positive and negative attitudes. About 29.8% of respondents agreed that people with mental illness were usually dangerous, with significant differences between medical and non-medical students ( $P=0.043$ ). Around 24.3% agreed that people with mental illness should not get married, and more than half (56.9%) thought that they could not marry someone with mental illness, with no significant difference between medical and non-medical students ( $P=0.859$ ). Over two thirds (68.7%) reported that they could maintain a friendship with someone who had a mental illness, with no significant difference between medical and non-medical students ( $P=0.665$ ). Over three quarters (76.5%) disagreed that

people with mental illness must be completely isolated, with significant differences between medical and non-medical groups ( $P=0.030$ ). The majority of respondents (78.7%) disagreed that they would be ashamed if a family member had a mental illness, but 40.7% agreed that if they were suffering from a mental health illness, they wouldn't want people to know about it, with no significant difference between medical and non-medical students in both cases ( $P=0.422$ ).

## Discussion

The present research aimed at investigating mental health literacy and attitudes towards psychiatric patients among students of Jazan University, KSA. The few previous studies conducted in many regions of Saudi Arabia mainly focused on traditional healing of psychiatric patients,<sup>13</sup> prevalence of psychiatric disorders among visitors to faith healers or students' attitudes towards mental illness.<sup>2,11,12</sup> Yet, very little is known about students' mental health literacy and attitudes towards persons with

mental illness, especially in the Jazan region.

Overall, the level of mental health literacy among students is intermediate, with no difference between medical and non-medical students. Regarding the etiology of mental illness, respondents showed a reasonable understanding of the reasons for mental illness. The majority argued that genetic inheritance, poor quality of life, and personal weakness are the key causes. However, they also viewed God's punishment, evil eye, magic, demonic possession, and envy as important factors, which are inconsistent with the literature in Saudi Arabia and Iraq.<sup>2,10-12</sup>

Students in this study showed positive attitudes towards people with mental illness, *e.g.* mental illness is identifiable by people's behavior, mentally ill persons can work, and anyone can suffer from a mental illness, similar to a recent study conducted in KSA at Qassim University.<sup>12</sup> At the same time, the majority hold negative perceptions, *e.g.* someone can identify mentally ill persons by their appearance and people with mental illness are not capable of true friendships. These findings are in line with previous studies in Iraq and India (which used the same question-

**Table 2. Mental health literacy prevalence according to gender and college type**

Groups	No.	Good, N (%)	Intermediate, N (%)	Poor, N (%)	Mean score $\pm$ SD	t-value, P-value
Gender						
Male	255	6 (2.4)	231 (90.6)	18 (7.1)	2.05 $\pm$ 0.30	t=0.938,
Female	276	11 (4.0)	248 (89.9)	17 (6.2)	2.02 $\pm$ 0.31	P=0.349
College						
Health-related	118	7 (5.9)	105 (89.0)	6 (5.1)	1.99 $\pm$ 0.33	t=4.081,
Other	413	10 (2.4)	374 (90.6)	29 (7.0)	2.04 $\pm$ 2.0	P=0.130
Total	535	17 (3.2)	483 (90.3)	35 (6.5)	2.04 $\pm$ 0.31	

**Table 3. Respondents' views on mental illness.**

Statements	Agree and strongly agree	Neutral	Disagree and strongly disagree
Etiology of mental illness			
Genetic inheritance	243 (45.8)*	146 (27.5)	142 (26.7)
Substance abuse causes most mental disorders	360 (67.8)	87 (16.4)	84 (15.8)*
Bad things happening to the person	345 (65.0)*	121 (22.8)	64 (12.1)
God's punishment	238 (44.9)	145 (27.4)	147 (27.7)*
Evil eye, magic, demonic possession, envy	315 (59.4)	108 (20.4)	107 (20.2)
Social relationship weakness	388 (73.1)*	91 (17.1)	52 (9.8)
People with mental illness			
Can always tell a mentally ill person by his/her physical appearance	286 (53.9)	132 (24.9)	113 (21.3)*
It is possible to tell a mentally ill person by his/her behavior	454 (85.7)*	60 (11.3)	16 (3.0)
Mentally ill persons are not capable of true friendships	279 (52.5)	138 (26.0)	114 (21.5)*
Mentally ill persons can work	227 (52.2)*	159 (29.9)	95 (17.9)
Anyone can suffer from a mental illness	262 (49.4)*	125 (23.6)	143 (27.0)
Care and management of people with mental illness			
One should hide his/her mental illness from his/her family	36 (6.8)	59 (11.1)	436 (82.1)*
Mental health services are widely available in my community	265 (50.0)	134 (25.3)	131 (24.7)*
Mentally ill people should be in an institution to be under control	465 (87.6)	48 (9.0)	18 (3.4)*
Information about mental illness is available at my PHC	250 (47.1)	133 (25.0)	174 (27.7)*
PHC clinics can provide good care for mental illness	189 (35.7)	166 (31.3)	175 (33.0)*
Faith healers are able to treat mental illness	242 (45)	189 (35.6)	100 (18.8)*

\*Correct choices.

naire).<sup>10,14</sup>

In general, most of the students have negative attitudes towards care and management of mental illness. The majority agreed with wrong statements such as the following: information about mental health is available in PHCs, good care can be given to people with mental illness in PHCs, and the mental health services are widely available in the Jazan community. The majority (87.6%) pointed out that mentally ill people must be under control. A significant proportion of students (45%) believed that faith healers can treat mental illness, which is similar to the findings of studies conducted in KSA.<sup>2,11</sup>

Regarding the attitudes towards people with mental illness, students were very mixed, with a higher proportion of respondents holding positive attitudes (54.2%). This finding is consistent with the study of Al-Qassim University, which indicated that medical and non-medical female students, generally, hold positive attitudes.<sup>12</sup> Most of the students reported that they can maintain a friendship with a person with mental illness, thinking that people are generally caring and sympathetic towards psychiatric patients and that mentally ill persons should have the same rights as anyone else. However, a significant proportion of students reported negative attitudes such as the follow-

ing: they can't marry someone with mental illness, they will be upset and disturbed when working with mentally ill persons, and they don't want people to know about their mental problems, showing the same findings as studies conducted in Iraq and India.<sup>10,14</sup>

In contrast to our expectations, there was no significant difference between medical and non-medical undergraduate students. However, some differences were reported, such as accepting that people with mental illness should have the same rights as others and disapproving that mentally ill people must be completely isolated, in which medical students were more sympathetic than non-medical. However, non-medical students have more positive attitudes than medical in their perception of psychiatric patients as not being dangerous. Attitudes of medical students would be important because they are the ones who will be providing medical services to a population that includes people with mental illness.

### Limitations

Some limitations in the present study should be taken into consideration. Firstly, the study was based on a cross-sectional study design, so study results should be understood in this context. Secondly, the correct answers

of some items of the standardized questionnaire were not listed, as in the original study of Sadik *et al.*,<sup>10</sup> and some items were excluded (or added) intentionally to be compatible with the Saudi context.

## Conclusions

Overall, this study highlighted that the majority of students had intermediate mental health literacy. However, nearly half of students hold negative attitudes towards mentally ill persons and management of mental illness. Thus, there is an urgent need to educate and change the attitudes of students regarding mental illness through mental health literacy programs, workshops and campaigns.

### Ethical consideration

This study was conducted in accordance with the ethical standards within the political borders of the Kingdom of Saudi Arabia. All participants read, understood and signed a written consent form. Participants were told that they had the right to withdraw from the study at any time and their information would be kept anonymous. The data collected from students were used only for scientific purposes.

**Table 4. Students' attitudes towards mentally ill patients according to type of college.**

Variable	Reponses	Medical (n=118), N (%)	Non-medical (n=413), N (%)	Total (n=531), N (%)	P-value
<b>Positive attitudes</b>					
I could maintain a friendship with someone with a mental illness	Strongly agree & agree	83 (70.3)	282 (68.3)	365 (68.7)	0.665
	Neutral	28 (23.7)	96 (23.2)	124 (23.4)	
	Str. disagree & disagree	7 (5.9)	35 (8.5)	42 (7.9)	
I could marry someone with a mental illness	Strongly agree & agree	18 (15.3)	64 (15.5)	82 (15.4)	0.859
	Neutral	35 (29.7)	112 (27.1)	147 (27.7)	
	Str. disagree & disagree	65 (55.1)	237 (57.4)	302 (56.9)	
People with mental health illnesses should have the same rights as anyone else	Strongly agree & agree	106 (89.8)	332 (80.4)	438 (82.5)	0.036
	Neutral	10 (8.5)	53 (12.8)	63 (11.9)	
	Str. disagree & disagree	2 (1.7)	28 (6.8)	30 (5.6)	
<b>Negative attitudes</b>					
Mentally ill persons are usually dangerous	Strongly agree & agree	27 (22.9)	131 (31.7)	158 (29.8)	0.043
	Neutral	47 (39.8)	118 (28.6)	165 (31.1)	
	Str. disagree & disagree	44 (37.3)	164 (39.7)	208 (39.2)	
The mentally ill should not get married	Strongly agree & agree	27 (22.9)	102 (24.7)	129 (24.3)	0.405
	Neutral	24 (20.3)	104 (25.2)	128 (24.1)	
	Str. disagree & disagree	67 (56.8)	207 (50.1)	274 (51.6)	
Mentally ill should not be allowed to make decisions	Strongly agree & agree	19 (16.1)	90 (21.8)	109 (20.5)	0.082
	Neutral	34 (28.8)	143 (34.6)	177 (33.3)	
	Str. disagree & disagree	65 (55.1)	180 (43.6)	245 (46.1)	
I would be ashamed if people knew that someone in my family had been diagnosed with a mental illness	Strongly agree & agree	5 (4.2)	44 (10.7)	49 (9.2)	0.099
	Neutral	14 (11.9)	50 (12.1)	64 (12.1)	
	Str. disagree & disagree	99 (83.9)	31 (7.2)	418 (78.7)	
If I were suffering from a mental health illness, I wouldn't want people to know about it	Strongly agree & agree	54 (45.8)	162 (39.2)	216 (40.7)	0.422
	Neutral	30 (25.4)	112 (27.1)	142 (26.7)	
	Str. disagree & disagree	34 (28.8)	139 (33.7)	173 (32.6)	

es. Ethical clearance was obtained from the Faculty of Medicine Ethical Committee.

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