



GENERAL POPULATION'S PERCEPTION AND STIGMA REGARDING DEPRESSION DISORDER PATIENTS: A POPULATION-BASED STUDY

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ABSTRACT

Background: Depression (also known as major depressive disorder) is a common and serious psychological illness in Arab countries in general and in Gaza Strip in specific. It is an important issue that must be dealt with it, as it can lead to suicide attempts and even death. Perceived stigma regarding psychiatric disorders in general and depression in explicit is one of the most important factors that play a part in how the depression disorder patients look at themselves and how the population looks at them. Our aim in this study is to determine the general population's perception and stigma regarding depression disorder patients in Gaza Strip. **Methodology:** This study is a population-based survey which was conducted across Gaza Strip. The targeted population for this study is for who are older than 18 years, which account for 1,280,300 persons. The data will be collected via an online questionnaire. **Results:** A total of 500 participants were included in the study, with the predominant age group from 18-25. Female participants are predominated over male participants (66.6% vs. 33.4%). The educational level among most participants was at the university level with varying degrees. The vast majority of the participants did not have depression (87.4%) or deal with anyone with depression (72%) but nearly half of the participants had a relative diagnosed with depression (44.2%). The age group of 18-25, female participants, single marital status, and university educated participants showed stigma of depression in comparison with other participants ($P < 0.001$). Participants who were not diagnosed with depression, not had a relative with depression or didn't deal with anyone with depression show more stigma depression than others ($P = 0.01$). These findings suggest that efforts are needed in order to increase awareness and education about depression, reduce the stigma surrounding mental illness, and improve access to mental health services. **Conclusion:** This population-based study highlights the existence of significant stigma and negative perceptions towards individuals with depression disorder. These findings suggest that efforts are needed to increase awareness and education about depression, reduce the stigma surrounding mental illness, and improve access to mental health services. By promoting understanding and acceptance, we can set up a more supportive environment for those living with depression disorder and work towards ending the discrimination and prejudice they face. It is crucial to address these issues to ensure that people with depression disorder receive the care and support they need to lead fulfilling lives.

KEYWORDS: Depression; Personal stigma; Perceived stigma; Community attitudes; Gaza Strip.

INTRODUCTION

The prevalence of mental health issues is rising worldwide.^[1] By 2020, mental illness will account for 15% of all diseases in the globe, up from 13% now.^[2] Mental or behavioral diseases afflict over 450 million individuals.

Depression is a common but fatal psychiatric disorder, with symptoms ranging from mild to severe, which can affect different aspects of patients' lives including thinking, feeling, and handling daily activities. There are different types of depression including.^[3]

- Major depressive disorder (MDD).
- Persistent depressive disorder (dysthymia).
- Perinatal depression.
- Seasonal affective disorder.
- Depression with symptoms of psychosis.

Diagnosis of depression depends on DSM-5 criteria, which include

- ≥ 5 symptoms from the 9 symptoms listed below for at least 2 weeks, with at least one of the symptoms being of depressed mood or loss of interest (anhedonia).

- These symptoms include: depressed mood for most of the day almost every day, loss of interest (anhedonia), weight change due to appetite change, sleep disturbance, psychomotor changes as observed by others, fatigue or loss of energy, delusional guilt, impaired ability to think or make decisions, and suicidal ideations.^[4]
- There are various risk factors for depression including.^[5]
- Sociodemographic factors such as: female gender and older age.
- Physical factors such as poorer coping abilities, physical morbidity, and impaired level of functioning.
- Psychological, social, and biological factors.

Regarding stigma, there are two types: the first one being public stigma, which is how surrounding people look at mentally-disordered patients, manifested as rejection by the population. The other type is self-stigma, which is how patients look at themselves, manifested as low self-esteem and increased depression.^[6] Depression is accompanied with public stigma as well as self-stigma.^[6] Higher level of self or public stigma is associated with increased psychological distress, impaired quality of life, and social functioning.^[7]

Our aim in this study is to explore the general population's perception and stigma regarding depression disorder patients in Gaza Strip.

METHODOLOGY

1. Study Design

The study design was a population-based survey. The aim of this study was to determine the perception and stigma of the general population on patients with depression. As the design is a population-based survey, it would allow capturing multiple sections of the population.

2. Study Setting

This study was conducted in Gaza Strip during the period between Oct 2022 to Feb 2023.

3. Population

The total number of population was 1,280,300.^[8]

4. Sample Size and Sampling

The sample size was 400 according to the Epi-info application with a confidence level 95%. However, we collected 500 participants. Participants were selected by non-random probability convenient sampling technique.

Eligibility Criteria (Inclusion and Exclusion)

People who were older than 18 years old.

5. Study Instruments

The data was collected via an online questionnaire. The questionnaire consists of 2 parts: Part 1 for

sociodemographic characteristic of the participants, and part 2 for depression stigma scale. Depression stigma scale contained 2 subscales: one for personal stigma (measurement of the respondent's personal attitudes towards depression) and one for perceived stigma (a measurement of the respondent's perceptions of other people's stigmatizing attitudes).^[9] Each item's selection of "strongly agree" or "agree" denoted the existence of a personal or perceived stigma.

6. Data Collection

The data was collected by senior medical students via online Google form.

7. Data Analysis

Data collected from the questionnaire were entered and analyzed using SPSS program version 23 computer software. Sociodemographic data were presented using descriptive statistics as means, median, percentages, and standard deviation. Independent T test and one-way Anova are used to show statistical significance among participants' characteristics. Chi square test was used to show the relationship between categorical variables.

8. Ethical Consideration

Take a permission from Faculty of Medicine-Islamic University of Gaza. Take a permission from the participants.

9. Pilot Study: No pilot study was done.

RESULTS

Sociodemographic and baseline characteristics, Data shown are frequencies (n and %). Total number of respondents = 500.

Sociodemographic characteristics		Frequency	Percentage
Age	18-25	407	81.4%
	26-35	65	13%
	36-45	11	2.2%
	46-55	11	2.2%
	> 55	6	1.2%
Gender	Male	167	33.4%
	Female	333	66.6%
Residency	North Gaza	71	14.2%
	Gaza	203	40.6%
	Middle	103	20.6%
	Khanyunis	75	15%
	Rafah	48	9.6%
Marital status	Single	403	80.6%
	Married	88	17.6%
	Divorced	8	1.6%
	Widow	1	0.2%
Educational level	Preparatory	5	1%
	Secondary	27	5.4%
	University	468	93.6%
Have you been diagnosed with depression before?	Yes	63	12.6%
	No	437	87.4%
Do you have a relative who was diagnosed with depression?	Yes	221	44.2%
	No	279	55.8%
Did you deal with anyone with depression?	Yes	140	28%
	No	360	72%

The study included 500 participants. Age ranged from 18 to above 55 with a large population being in the age group from 18-25 (n = 407). Female participants (n= 333) predominates male participants (n= 167) (66.6% vs. 33.4%). Figure 1 shows age groups distribution based on gender.

More than half of study participants were from either Gaza City (n= 203, 40.6%) or North Gaza governorate (n= 71, 14.2%). Figure 2 shows study participants' distribution according to residency place.

The majority of study participants were single (n= 403, 80.6%), and small percent of the participants were married (n= 88, 17.6%). On the other hand, 8 participants were divorced (1.6%) and only one participant was widow (0.2%). Regarding the educational level, most of the participants were graduated or in the university level with varying degrees. Figure 3 shows the educational level among study participants.

The vast majority of study participants have not been diagnosed previously with depression (n = 437, 87.4%) but nearly half of the participants have a relative who was diagnosed with depression (n = 221, 44.2%). More than two-thirds of the participants did not deal with

anyone with depression (n= 360, 72%). Figure 4 shows participants who were diagnosed with depression or who have a relative diagnosed with depression based on gender.

Personal and Perceived depression stigma scale**Table 1: Summarized the distribution of the study participants according to their responses about the personal depression stigma Sub-scales. Data shown are frequencies(n and %), mean \pm SDM and weight mean.**

	Question		Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Mean	Std. deviation	Rank
1.	People with depression could snap out of it if they wanted	n	15	55	154	182	94	3.57	1.016	4
		%	3	11	30.8	36.4	18.8			
2.	Depression is a sign of personal weakness	n	32	75	90	220	83	3.49	1.130	5
		%	6.4	15	18	44.0	16.6			
3.	Depression is not a real medical illness	n	36	84	77	141	162	3.62	1.295	3
		%	7.2	16.8	15.4	28.2	32.4			
4.	People with depression are dangerous	n	26	58	131	224	61	3.47	1.023	6
		%	5.2	11.6	26.2	44.8	12.2			
5.	It is best to avoid people with depression so you don't become depressed yourself	n	24	38	81	191	166	3.87	1.114	1
		%	4.8	7.6	16.2	38.2	33.2			
6.	People with depression are unpredictable	n	38	142	210	88	22	2.84	0.964	9
		%	7.6	28.4	42.0	17.6	4.4			
7.	If I had depression, I would not tell anyone	n	53	71	123	176	77	3.30	1.211	7
		%	10.6	14.2	24.6	35.2	15.4			
8.	I would not employ someone if I knew they had been depressed	n	16	47	78	241	118	3.80	1.010	2
		%	3.2	9.4	15.6	48.2	23.6			
9.	I would not vote for a politician if I knew they had been depressed	n	68	80	104	177	71	3.21	1.261	8
		%	13.6	16.0	20.8	35.4	14.2			
Weight mean								3.4610		
Std								0.600		

This table shows Descriptive Statistics for importance of; It is best to avoid people with depression so you don't become depressed yourself, from which we find that the 1st average was awarded to question (5) with Deviation 1.114, the weight average of this section was 3.4610. Std 0.60; I would not employ someone if I knew they had been depressed, from which we find that the 2nd average was awarded to question (8) with Deviation 1.010, the weight average of this section was 3.4610. Std 0.60.

People with depression are unpredictable, from which we find that the lowest average was awarded to question (6) with Deviation 0.964, the weight average of this section was 3.4610. Std 0.60.

Scale items' reliability (Cronbach's alpha) is equal to 0.69.

So, the average of importance of Personal depression stigma is 3.4610 which is considered high level since the interval as follows:

Low Level: [1-259]

Moderate Level: [2.60- 3.39]

High Level: [3.40 – 5]

Table 2: Summarized the distribution of the study participants according to their responses about the perceived depression stigma Sub-scales, Data shown are frequencies(n and %), mean \pm SDM and weight mean.

Question		Strongly	Agree	Neutral	Disagree	Strongly	Mean	Std.	Rank
1 Most people believe that	n	86	150	154	87	23	2.61	1.101	3
	%	17.2	30.0	30.8	17.4	4.6			
2 Most people believe that	n	108	206	101	71	14	2.34	1.058	7
	%	21.6	41.2	20.2	14.2	2.8			
3 Most people believe that	n	132	201	89	54	24	2.26	1.112	8
	%	26.4	40.2	17.8	10.8	4.8			
4 Most people believe that	n	61	159	140	124	16	2.75	1.063	1
	%	12.2	31.8	28.0	24.8	3.2			
5 Most people believe that it	n	83	165	123	101	28	2.64	1.146	2
	%	16.6	33.0	24.6	20.2	5.6			
6 Most people believe that	n	60	210	166	54	10	2.48	0.914	5
	%	12.0	42.0	32.2	10.8	2.0			
7 If they had depression,	n	200	186	84	25	5	1.88	0.920	9
	%	40.0	37.2	16.8	5.0	1.0			
8 Most people would not	n	78	175	151	78	18	2.56	1.047	4
	%	15.6	35.0	30.2	15.6	3.6			
9 Most people would not	n	101	174	139	72	14	2.44	1.056	6
	%	20.2	34.8	27.8	14.4	2.8			
Weight mean							2.4400		
Std									0.65709

This table shows Descriptive Statistics for importance of; Most people believe that people with depression are dangerous, from which we find the 1st average was to question (4) with Deviation 1.063, the weight average of this section was 2.4400. Std 0.65709; Most people believe that it is best to avoid people with depression so that you don't become depressed yourself, from which we find the 2nd average was to question (5) with Deviation 1.146, the weight average of this section was 2.4400. Std 0.65709.

If they had depression, most people would not tell anyone, from which we find the lowest average was to question (7) with Deviation 0,920, the average weight of this section was 2.4400. Std 0.65709.

Scale items' reliability (Cronbach's alpha) is equal to 0.80.

So, the average of importance of perceived depression stigma was 2.4400 which is considered low level since the interval as follows:

Low Level: [1-259]

Moderate Level: [2.60- 3.39]

High Level: [3.40 – 5]

Relationship between depression stigma scale and Sociodemographic characteristics, Data shown are mean and p value

Table 3: Statistical relationship between depression stigma scale and.

Variable		Mean score	t/F	Sig.
Gender	Male	2.86	-3.544	<0.001
	Female	3.02		
Age	18-25	3.01	7.782	<0.001
	26-35	2.80		
	36-45	2.77		
	46-55	2.77		
	>55	2.21		
Marital Status	Single	3.01	8.404	<0.001
	Married	2.80		
	Divorced	2.50		
	Widowed	2.19		
Education level	Preparatory	2.44	16.292	<0.001
	Secondary	2.53		
	University	2.99		
Participants diagnosed with depression	Yes	2.82	-2.6	0.01

	No	2.98		
Participants has relative diagnosed with depression	Yes	2.87	-3.978	0.01
	No	3.04		
Participants deal with	Yes	2.82	-4.348	0.003
	No			

Table 3 summarized the relationship between depression stigma scale and Sociodemographic characteristics (Gender, Age, Marital status and educational level) of the study participants, as well as the relationship between depression stigma scale and patients diagnosed with depression, having a relative with depression, and dealing with anyone with depression. By using a one-sample t-test and One-way ANOVA, this table shows the mean score, T/F test that compares the population variances or mean and significance of the test results. According to the results, Female patient shows stigma of depression more than male ($m=3.02$ vs. 2.86 , $P<0.001$). Age group from 18-25 shows more stigma depression in comparing to the rest of the age group ($m=3.01$, $P<0.001$), Also single patient shows more depression stigma ($m=3.01$, $P<0.001$). The participants with higher education level show more depression stigma than other participants ($m=2.99$, $P<0.001$), all of these relationships are strongly statistically significant.

The participants who were not diagnosed with depression show more depression stigma than those who were diagnosed with it ($m=2.98$ vs. 2.82 , $P=0.01$). Those who were having a relative with depression show less depression stigma than others ($m=2.87$ vs. 3.04 , $p=0.01$). In addition, the people who were dealing with anyone with depression shows less depression stigma than others ($m=2.82$ vs. 3.02 , $p=0.003$), all of these relationships are statistically significant.

DISCUSSION

Stigma towards depression

This is a population-based study conducted among the entire Gaza Strip to evaluate the stigma towards depression and evaluate whether there are risk factors or sociodemographic characteristics towards perception of stigma among 500 responders.

High level of stigma towards depression was detailed as 958 of people reported experiencing personal stigma whereas 2,535 of people reported experiencing perceived stigma, showing higher perceived stigma than personal stigma. This indicates that the level of stigmatization was found to be higher in the community more than the patient and family members who visit the clinic for treatment. A previous study, which was conducted in China, showed that perceived stigma was higher than personal stigma among responders.^[9] A study conducted among Arab adolescents for personal and perceived stigma found that the majority of adolescents reported higher level of perceived stigma in comparison with personal stigma.^[10] Our results were similar to a study conducted in Germany which showed that perceived stigma is much higher in general population than other

groups.^[11] It was assumed that depression can be handled and dealt with by the individual, without seeking professional aid and therapy due to the cultural view that mental illness is a spiritual weakness.

The DSS-Personal item that ranked the 1st score was 'It is best to avoid people with depression so you don't become depressed yourself' which was inconsistent with a study conducted in China that revealed 'people with depression could snap out' which scored the 1st rank.^[9] For the DSS-Perceived item that ranked the 1st was 'Most people believe that people with depression are dangerous' which suggest that there's an underlying stigma towards those with depression, which affects communication and enrollment within the community.

So, why does the general population in our study have more perceived stigma than personal stigma? In general, there are many different factors that contribute to perceived stigma of being greater than personal stigma in some societies, such as cultural views, a lack of knowledge and awareness, and fear of discrimination. It's believed that our community tends to formulate a stigma regarding psychiatric disorder patients without getting to know them in person, which eventually leads to further detachment between society as a whole and these patients, further exacerbating their struggles of belonging. Moreover, there is a lack of access to mental health education and information, which contributes to a lack about knowledge of depression and its treatment.

Sociodemographic characteristics and its association with the depression stigma: In this study, we found that female, younger ages, and high educational level was associated with more depression stigma. In contrast to our study regarding the gender and age, a study in China revealed that male gender and older individuals showed high personal stigma, with age also being associated with high perceived stigma.^[9] However, an Australian study showed that females had more perceived stigma, which is consistent with our study findings.^[12] An Arab study among Jordanian adolescents revealed that females had higher perceived stigma in comparison with male; however, there's no difference between female and male responders in personal stigma.^[10] A study in India found that female gender has more perceived stigma.^[13] Another study found that there was no gender difference regarding perceived stigma.^[11] It was suggested that gender stereotypes, which portray women as more sensitive and emotional, may also be to blame for the fact that women are stigmatized for depression more than men in terms of personal stigma due to gender-based violence and discrimination, which discourages women from discussing their mental health. However, in the aspect of perceived stigma, it was

suggested that females may have more difficulty with understanding and showing empathy towards those with depression.

Our study found that younger individuals (18-25 years) reported a higher level of perceived and personal stigma in contrast to a study carried out in China which revealed that older age reported higher level of personal stigma.^[9] One of the reasons for this is that in our study population, the majority was between 18-25 years and another reason is that younger ages will have a close contact with either mentally healthy people and mentally-unhealthy people including depressed people because may have a friend who is depressed.

Also, our study found that higher educational level was associated with high depression stigma and this finding was consistent with the findings in a study which was assumed that more educational level will make people more liable for stigma issues for mental illnesses in general and depression in specific.^[10]

In addition, our study showed that those without a history of depression have more stigma. This finding was consistent with a study^[10] that revealed that those who didn't report mental illness have higher personal stigma than those diagnosed with depression, which is thought to be due to that those who didn't experience depression will never think like those with depression, so there will be a gap in communication and interaction manifested as personal stigma and even perceived stigma. Another finding is that contact with people with depression showed less stigma towards depression which is consistent with the results of a study involving the predictors of depression stigma.^[14]

CONCLUSION, RECOMMENDATIONS, AND LIMITATIONS

Conclusion

The study aimed at determining general population's perception and stigma regarding depression disorder patients among a sample of 500 participants from Gaza Strip, Palestine. The results of the study showed that the majority of participants were in the age group from 18-25, the majority being females, single, and university educated. The vast majority of the participants did not have depression or deal with anyone with depression but nearly half of the participants had a relative diagnosed with depression. The age group from 18-25, female participants, single marital status, and university educated participants showed depression stigma in comparison with other participants. The participants who were not diagnosed with depression, had a relative with depression, or dealt with anyone with depression show more stigma depression than others do.

In conclusion, this population-based study highlights the existence of significant stigma and negative perceptions towards individuals with depression disorder. These findings suggest that efforts are needed in order to

increase awareness and education about depression, reduce the stigma surrounding mental illness, and improve access to mental health services. By promoting understanding and acceptance, we can create a supportive environment for those living with depression disorder and work towards ending the discrimination and prejudice that they face. It is crucial to address these issues to ensure that individuals with depression disorder receive the care and support they need to lead fulfilling lives.

Limitations: This study aimed at evaluating the depression stigma throughout Gaza Strip, taking into consideration specific sociodemographic characteristics. We tried to spread this questionnaire to different age groups, different educational levels, and different marital status; however, the majority of our sample respondents were those aged (18-25 years), with educational level being university level, which we believe was a kind of limitation for this study.

Another limitation of this study is that because the overall score of scale was small, we could not perform analysis to evaluate between sociodemographic characteristics with each scale alone.

RECOMMENDATIONS

Create a programs and training courses for healthcare system (doctors, nurses and others) in an attempt to spread knowledge to people of different ages and places.

Further research on the healthcare system and evaluate their stigma towards depression.

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