

## Study of stigma among depressed and COVID-19 infected patients

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**Copyright** The Authors published by Al-Azhar University, Faculty of Medicine, Cairo, Egypt. Users have the right to read, download, copy, distribute, print, search, or link to the full texts of articles under the following conditions: Creative Commons Attribution-Share Alike 4.0 International Public License (CC BY-SA 4.0).

**doi:** 10.21608/aimj.2021.88171.1539<sup>2</sup>Psychiatry Department, Faculty of Medicine, Al-Azhar University, Cairo, Egypt.<sup>2</sup>Epidemiology Department, High Institute of Public Health, Alexandria University, Egypt.**ABSTRACT**

**Background:** Stigma is a phenomenon of underlying difficulties. It is one of the major challenges interfering with health care services especially in the need of rapid efficient dealing like what we have in covid 19 pandemic and mental health..

**Aim of The Work:** to assess the presence of stigma in covid 19 infected patients and depressed patients and assessed certain factors that might associated with stigmatization.

**Subjects and Methods:** he study was conducted among 70 patients; 35 patients with depression and 35 patients post COVID-19 using the Explanatory Model Interview Catalogue (EMIC) Stigma scale from outpatient psychiatric and chest clinics after verification of diagnoses.

**Results:** The EMIC score of the studied groups showed that the mean score of depressed group is significantly higher than the mean score of covid group ( $28.2 \pm 9.8$  vs  $21.7 \pm 9.4$ , respectively). There was a non-significant negative correlation between age and stigma. Association between sex and EMIC score among the different groups showed that females were more affected than male in both groups, while we found that EMIC score higher mean in single ( $29.6 \pm 9.3$ ) than married ( $26.5 \pm 10.5$ ) in depressed group and was nearly equal in COVID-19 group. Also, we found an association between educational level, work and stigma in both groups.

**Conclusion:** Stigma is still a major concern affecting the efficiency of health care with more prevalent against mental health (depressed patients) than covid 19 patients. Age, sex, educational level and work all of them should considered factors of stigmatization.

**Keywords:** Stigma; Mental Illness; Depression; COVID 19 Infection.

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**INTRODUCTION**

Since the emerging of Corona virus pandemic in Wuhan, China in December 2019, we are facing a real threat to the survival of humanity. The pandemic spread globally and has devastating impacts on human community. One of these impacts is the stigma placed on those infected with the virus.<sup>1</sup>

Stigma is a phenomenon of underlying difficulties. It is a discrimination and victimization against a recognizable group of individuals, places or nations.<sup>2</sup> Stigma usually results from fear and misunderstanding. It is a worldwide hindrance to health seeking behavior, commitment to care and adherence to treatment in case of multiple conditions.<sup>3-7</sup> In 2016, Rössler concluded that no country or community can give individuals suffering from mental disorders the same value as individuals with no mental disorder.<sup>8</sup>

As a notable contrast, stigma empowers different assortments of discriminations that deny full acceptance of the persons by their communities and reduce the chances and opportunities of them.<sup>(9, 10)</sup> Stigma influences health outcomes by deteriorating

all healthcare services and ultimately leads to poor health.<sup>11</sup>

Stigma is defined by Goffman in 1963 as a condition of any individual facing social unacceptance which applied to individual suffering from mental disorders, physical inability or being unemployed. Goffman said that stigma is having two aspects; what made stigmatizing and how a person feel this stigma.<sup>12</sup>

Psychiatric patients are the most patients suffering from being stigmatized and marginalized in their communities. Regrettable connotations and false awful presumptions related to mental illnesses can be more damaging than the illness itself. However, the definition of mental illness is not so simple.<sup>8</sup>

Stigma has several types including public stigma, self-stigma, perceived stigma, label avoidance, associative stigma, structural stigma and health professional stigma.<sup>(13)</sup> Stigma has many impacts on people including deterioration of their symptoms and reduced treatment compliance especially with self-stigma. Stigma might cause loss of hope, loss of confidence, severe mental manifestations, isolation and avoidance relationships, struggling in work, loss of communication with peers and family, increase violence up to sexual abuse and false beliefs

regarding self and working place.<sup>3, 14</sup> The impact of stigmatization prevails, affecting political enthusiasm, support of services and lack of funds for mental health research compared to other health problems.<sup>15</sup>

The occurrence of outbreaks of pandemics leads to emerging of sense of fear from the disease that has unknown cause and fatal outcome especially when preventive measures including quarantine used in trial of controlling the spread of infection.<sup>16</sup> Stigma as well emerged with outbreaks and caused discrimination against infected patients which in turn caused awful consequences on individuals and communities.<sup>17</sup> These preventive measures also were done during the COVID-19 pandemic which might result in stigmatization against patients.<sup>18</sup> Several forms of stigma had been found during the COVID-19 pandemic mostly against Asians and healthcare professionals.<sup>19</sup> Asian suffered from xenophobia (fear from foreigners) in many countries worldwide including Egypt which reported rejection of Asians from both Egyptian community and official government.<sup>19, 20</sup>

Stigmatization against COVID-19 patient in Egypt reached to refusal of burying dead victims in fear from being infected.<sup>21</sup> This refusal also was reported in Indonesia.<sup>22</sup> That happened despite the announcement from World Health Organization (WHO) regarding no evidence was found for transmission of infection from cadaveric patients and published a guideline on handling with death of COVID-19.<sup>23</sup> These accidents raised the alarm of occurrence of stigma against COVID-19 patients. Stigma during COVID-19 is not against patients only, it also arose against physicians as they are the persons dealing with patients which means that they are the highest susceptible groups to infection. Physicians suffered from refusal of being transported by taxi drivers, delivered food from restaurants or even lived in their homes between their neighbours safely.<sup>24</sup> A study found that more than 75% of Egyptian healthcare workers suffered from stigmatization and harassment from relatives of patients.<sup>25</sup>

These incidents explored a threat of another face of stigma which might be found in non-reporting of cases, avert requesting medical care and negative impact on psychological statuses of individuals who suffered from being stigmatized.<sup>2</sup>

The purpose of the present study was to assess stigma present with both depression and covid 19 patient and its relation to some factors.

### SUBJECTS AND METHODS

The study was conducted among 70 patients; 35 patients suffered from depression and 35 patients suffered from COVID-19 infection. The studied patients were recruited from the psychiatric outpatient clinic fulfilling the DSM-V criteria for major depressive episode "mild to moderate" and have completed Beck depression inventory BDI-II in addition to MADRS as a second outcome measure and patients with COVID-19 infection were recruited from the chest outpatient clinic fulfilling the clinical,

laboratory and radiological criteria for COVID-19 infection. The COVID-19 patients were visiting the OPD for follow-up after finishing the two weeks home quarantine.

### Instrument:

The Explanatory Model Interview Catalogue (EMIC) Stigma scale:

It was Developed to invent beliefs, perceptions, and practices related to disease in a cultural study of leprosy and mental health in Bombay, leprosy is a disorder particularly suited to studying the interrelationship between culture, mental health and medical illness due to its deep roots. Cultural meanings, emotional burden, and underutilization of effective treatment (26).

The EMIC scale is a self-administered scale including in its final form 15 statements regarding self-stigmatization perceived by the subjects. Arabic versions of the EMIC stigma scale were obtained from the study "Stigma towards psychiatric disorders in a sample of depressed females in two different communities" (27).

Statistical analysis:

The collected data were revised, coded and analyzed using SPSS version 25 (IBM, USA). Quantitative variables were expressed as mean and standard deviation (SD). Categorical variables were examined using chi square ( $X^2$ ) test and Monte Carlo exact probability. Quantitative variables were tested using Pearson's correlation, while student's t test and ANOVA test were used for comparing means between groups. Differences at p value < 0.05 were considered to be statistically significant.

### RESULTS

Table (1) shows that the highest age category in depressed pt. group was 21-25 & 26-30 years old (20% for each), while the highest age in covid pt. group was 18-20 & 41-45 y. old (20% for each). Males were higher in both studied groups. Singles were higher among depressed group of patients, while married patients were higher among COVID-19 group. As relation to educational level depressed group was equal high & low level educated more than middle level but in covid group high education was the highest. Most of both groups was working and most of depressed group does not take medication while covid group most of them on medical treatment. The difference between both groups as regard sociodemographic characteristics was no significant.

Socio-demographic characteristics	Depression (n= 35)		COVID (n= 35)		Test of significant (p value)
	No.	%	No.	%	
<b>Age</b>					MCp= 1.0
18 – 20	6	17.1	7	20.0	
21 – 25	7	20.0	6	17.1	
26 – 30	7	20.0	6	17.1	
31 – 35	5	14.3	5	14.3	
36 – 40	4	11.5	4	11.5	
41 – 45	6	17.1	7	20.0	
<b>Sex</b>					$\chi^2 = 0.058, p = 0.81$
Male	19	54.3	20	57.1	
Female	16	45.7	15	42.9	
<b>Marital status</b>					$\chi^2 = 0.915, p = 0.339$
Single	19	54.3	15	42.9	
Married	16	45.7	20	57.1	
<b>Education</b>					$\chi^2 = 1.121, p = 0.571$
High education	12	34.3	14	40.0	
Moderate education	11	31.4	13	37.1	
Low education	12	34.3	8	22.9	
<b>Work</b>					$\chi^2 = 0.521, p = 0.47$
Yes	18	51.4	21	60.0	
No	17	48.6	14	40.0	
<b>Treatment</b>					$\chi^2 = 0.229, p = 0.632$
Yes	16	45.7	18	51.4	
No	19	54.3	17	48.6	

$\chi^2$ ; Chi square test, MCp; Monte Carlo Exact Probability

**Table 1:** Socio-demographic characteristics of study sample groups

Table (2) shows a significance difference between both groups as regard the EMIC score (p= 0.006) with mean score of  $28.2 \pm 9.8$  and  $21.7 \pm 9.4$ , respectively. Association between Sex and EMIC score among the different groups appears in table (3) and shows that mean was higher in female than male in both groups but with increased deference in depressed group than covid group (p= 0.014 vs 0.061).

EMIC score	Depression (n= 35)	COVID (n= 35)	Test of significant (p value)
Min – Max	12 – 44	6 – 44	t= 2.852, p= 0.006*
Mean $\pm$ SD	$28.2 \pm 9.8$	$21.7 \pm 9.4$	
Median	25.0	21.0	

t; independent t test, \* Significant (p< 0.05)

**Table 2:** EMIC score of the study groups

Groups	Gender		Test of significant (p value)
	Male	Female	
<b>Depression (n= 35)</b>			t= -2.608, p= 0.014*
Mean $\pm$ SD	$24.5 \pm 6.9$	$32.6 \pm 11.2$	
Min. – Max.	15 – 44	12 – 44	
Median	24.0	36.5	
<b>COVID (n= 35)</b>			t= -1.940, p= 0.061
Mean $\pm$ SD	$19.1 \pm 9.3$	$25.1 \pm 8.5$	
Min – Max	6 – 40	12 – 44	
Median	18.0	23.0	

t; independent t test, \* Significant (p< 0.05)

**Table 3:** Association between Sex and EMIC score among the different groups

Tables (4 - 7) illustrate the relation between other sociodemographic characteristics and EMIC score. However, the difference among demographic subgroups of both depressed and COVID-19 patients is not significant.

Groups	Marital status		Test of significant (p value)
	Single	Married	
<b>Depression (n= 35)</b>			t= 0.938, p= 0.355
Mean $\pm$ SD	$29.6 \pm 9.3$	$26.5 \pm 10.5$	
Min. – Max.	18 – 44	12 – 44	
Median	30.0	24.5	
<b>COVID (n= 35)</b>			t= -0.031, p= 0.976
Mean $\pm$ SD	$21.7 \pm 9.8$	$21.6 \pm 9.0$	
Min – Max	6 – 44	6 – 35	
Median	21.5	21.0	

t; independent t test

**Table 4:** Association between marital status and EMIC score among the different groups

Socio-demographic characteristics	Education			Test of significant (p value)
	High	Moderate	Low	
<b>Depression (n= 35)</b>				F= 0.339, p= 0.715
Mean $\pm$ SD	$30.0 \pm 9.8$	$27.9 \pm 10.6$	$26.7 \pm 9.7$	
Min. – Max.	12 – 40	18 – 44	15 – 44	
Median	30.5	21.0	23.0	
<b>COVID (n= 35)</b>				F= 0.942, p= 0.4
Mean $\pm$ SD	$21.0 \pm 8.9$	$24.2 \pm 10.5$	$18.6 \pm 7.9$	
Min – Max	6 – 40	10 – 44	6 – 30	
Median	20.5	23.0	20.0	

F, One way ANOVA test

**Table 5:** Association between education and EMIC score among the different groups

Groups	Work		Test of significant (p value)
	Yes	No	
<b>Depression (n= 35)</b>			
Mean ± SD	27.6 ± 9.7	28.8 ± 10.2	t= -0.360, p=0.721
Min. – Max.	12 – 40	15 – 44	
Median	26.0	24.0	
<b>COVID (n= 35)</b>			
Mean ± SD	21.4 ± 9.6	22.0 ± 9.4	t= -0.174, p= 0.863
Min – Max	6 – 44	6 – 35	
Median	21.0	22.0	

t; independent t test

**Table 6:** Association between Work and EMIC score among the different groups

Groups	Treatment		Test of significant (p value)
	Yes	No	
<b>Depression (n= 35)</b>			
Mean ± SD	28.3 ± 8.4	28.1 ± 11.1	t= 0.061, p= 0.952
Min. – Max.	15 – 44	12 – 44	
Median	27.5	24.0	
<b>COVID (n= 35)</b>			
Mean ± SD	21.8 ± 8.2	21.5 ± 10.7	t= 0.077, p= 0.939
Min – Max	6 – 40	6 – 44	
Median	21.5	21.0	

t; independent t test

**Table 7:** Association between treatment and EMIC score among the different groups

		Age	
		Depression	COVID
EMIC	r	-0.139	-0.165
	p	0.426	0.343

**Table 8:** Correlation between age and EMIC score among different groups

While table (8) shows that there is a negative weak non-significant correlation between age and EMIC score in both group but higher correlation in depressed group than covid group.

**DISCUSSION**

The stigma of mental illness is a global concern. It affects the treatment and the burden of diseases worldwide. With emergence of the new coronavirus pandemic, stigma has also affected the efficiency of treatment, which also has increased the burden of this pandemic.

In this study we wanted to discuss the stigma toward depression and stigma toward covid 19 infection and to search some factors to assess degree of stigmatization by applying EMIC to two groups depressed patients and covid patients.

In depression group, the most of them was 21-30 years old which the main age for depression, and more of them was male patients which is not relevant as females have the highest prevalence of depression. However, this indicates that males’ patients follow up their disease regularly than females.

As regard covid group the age 18-20 & 41-45 y. old was the highest age which also predictable as the infection common in young and older patients or this age group which follow up regularly, also it appears to be more in male than female pt.

We found that EMIC score in depressed group (28.2 ± 9.8) more than covid group (21.7 ± 9.4) which means that still the stigmatization toward mental illness is higher than other diseases, but it also indicates the emerging of stigma against COVID-19 patients in our society.

A study in 2017 on more than 200 psychiatric patients over a period of two years showed that self-stigma had a negative effect on recovery after one and two years.<sup>(28)</sup>

Like our study, the National Johns Hopkins University Pandemic Pulse project found a stigma against COVID-19 infections rage across the country where one out of four Americans associate shame with COVID-19.<sup>29</sup>

When we studied the association between gender and stigma in the two groups, we found that females were significantly more stigmatized than male. This may be because females more emotional than males, which means that gender factors should be seen as stigmatization risk factor for depression and the new coronavirus illness.

We found that single patients have higher score than married in depression group but there is no difference in COVID-19 group which mean that marital status affect stigma in mental illness.

There is no significant difference as relation to educational level and score of EMIC in both groups, but our study showed higher score in high educational level in depression group than other level.

In both groups we found that the non-working patients were stigmatized more than working patients which might related to being unemployed also increases the effect of feeling of stigma. This agrees to some degree with a 2019 national poll conducted by the American Psychiatric Association which found that psychiatric disorders stigma is the major challenge in the workplace. About half of workers were concerned to discuss mental health problems in their work. More than one in three were concerned about retaliation or being fired if they sought mental health care, while one in five workers can talk freely about their mental issues.<sup>30</sup>



Taking treatment does not affect the feeling of being stigmatized among our patients which means that the stigma to the presence of disease perse not to the treatment.

### CONCLUSION

Stigma is a major hidden threat against goals of health care organizations. It affects both depressed and covid 19 infected patients. However, it is slightly higher among depressed patients. Age, sex, working status are among factors affecting the appearance of stigma. We found that stigma affected by the illness itself whatever taking treatment or not. So, we need marked work up on it.

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