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The Effects of Corona Virus (COVID-19) Outbreak on the Individuals' Mental Health and on the Decision Makers: A Comparative Epidemiological Study

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ABSTRACT

Background: The results of epidemiological studies help in developing protective and treatment plans for community members, and identifying the psychological support services that individuals need to reduce the negative effects of these stressful conditions. Therefore, this study aimed to detect the effect of the outbreak of the deadly COVID-19 on the mental health of individuals. A survey descriptive design was used in this study to detect the level of psychological problems and to determine the differences in psychological problems due to nationality, age, sex, social status, learning level, and income. Method: A random sample consists of 5611(3423 Egyptians and 2188 Saudis) participants was chosen, their ages ranged between (16 to more than 50) year. The study sample was divided into sub-groups according to nationality, age, sex, social status, learning level, income level. The researchers in this study prepared psychological problems symptoms inventory that has been applied online to the sample. Results: The findings indicated that the increased prevalence of COVID -19 has a negative effect on the mental health of individuals, as the level of psychological problems were increased, and the results also found differences in the prevalence of psychological problems symptoms due to demographic variables. Conclusion: The study results emphasized the importance of prevention and treatment of psychological problems symptoms caused by the outbreak of the deadly COVID-19. As well as, these findings stressed on the role of counseling and therapy via the internet as well as, cross-cultural counseling and treatment.

Keywords: COVID-19, Mental health, Psychological problems symptoms, Nationality, Psychological service providers, Decision Makers, Epidemiological study

INTRODUCTION

Coronavirus disease (COVID-19) is a new strain that was discovered in 2019 and has not been previously identified in humans. Common signs of infection include respiratory symptoms, fever, cough, shortness of breath and breathing difficulties. In more severe cases, the infection can cause pneumonia, severe acute respiratory syndrome, kidney

failure and even death [1]. We are witnessing a substantial increase in the number of infections in Germany. As a result, the authorities have imposed drastic restrictions on everyday life, in a move to slow down any further outbreak of the virus. On 11 March 2020, the Director-General of WHO declared the spate of infections caused by COVID-19 a pandemic.

MENTAL HEALTH DETERMINATES

The determinants of mental health and mental disorders are not confined to individual human characteristics, such as their ability to manage their thoughts, emotions, behaviors, and interactions with others, but also include social, cultural, economic, political, and environmental factors, such as national policies, social security, living standards, working conditions, and community support. Factors leading to these disorders include genetic, nutrition, perinatal infections, and exposure to environmental hazards, such as deadly viruses. Chong, et al. [2] stated that the spread of the SARS pandemic and the high mortality rate have caused great anxiety and panic throughout the world.

Mental disorders are the most features of the twenty-first century, due to the stress and daily tensions, excitement, class differences, and efforts towards perfection. Also, there are mental disorders of organic origin, which is also not far from our way of living, whether it is at the level of food and drink, or at the level of housing and environmental pollution and noise. From here, we note that the new century brings us daily a set of stress which can lead to mental problems [3]. WHO short- report about mental health preventive mentioned that mental health impairment to stress and symptoms related to chronic and permanent stress [4]. Therefore, preventive interventions focus on and reduce risk factors, and improve the protective factors associated with mental health disorders. That is why we must work on the positive promotion of mental health, by increasing psychological well-being, increasing flexibility and eligibility, and creating support for living, living and environmental conditions.

Man lives in a psychological climate that is not without tensions and various stresses, among them the outbreak of COVID-19. Arnout [5] pointed that with the persistence of these stresses, increasing intensity, and the inability to face them effectively and using negative coping methods, the individual reaches the stage of exhaustion in which he is exposed to physical diseases and psychological problems. The results of many studies revealed a high rate of psychological problems in this age, these findings indicated that more than a third of the world's population suffers from various forms of mental disorders and problems.

Psychological problems symptoms defined as specific indicators or signs that express the presence of a defect or disorder, and these indicators may be directly touched without the individual talking about them, through the external appearance of the person, and they may be indirect talking about the individual and need the contribution of its own to talk about it and it is difficult to detect for anyone because it is not visible [3,6].

Psychological Problems and COVID-19 Pandemic

The emergence of psychological problems symptoms from the perspective of psychoanalysis is a process of adapting to this individual to stress, as it gives the individual some comfort. The psychological problems symptoms is a functional disorder in one aspect of the personality [3].

According to Derogatis [7] psychological problems symptoms divided into nine symptoms, as follow:

Somatization: is the suffering caused by physical weakness. They are mainly related to physical complaints in the intestinal, cardiac, respiratory, muscle pain, and permanent health concerns [8].

Obsessive-compulsive disorder: Reflects a focus on thoughts, impulses, fears that one cannot get rid of, and compulsive actions in the form of continuous or periodic kinetic rituals.

Interpersonal sensitivity: Feeling of inferiority and incompetence compared to others, discomfort in social gatherings, feelings of shame, and disdain for oneself, in addition to interpreting the behavior of others personally.

Depression: Feeling of helplessness, hopelessness, imperfection, sadness, low mood and energy, decreased activity, loss of hope, guilt, isolation from daily life activities and thoughts of suicide [9].

Anxiety: Mood in chaos in most or all of the usual activities, including loss of appetite, change in weight, feelings of guilt, difficulty concentrating, and thoughts about death and suicide. nervousness, tremor, feeling fear [10].

Hostility: Means thoughts, feelings, and actions that are considered characteristics of the negative state of anger, and it also includes resentment, aggression, sniping, and extreme anger.

Phobia: A persistent fear of a person, a place, something, a situation, an irrational response that is inappropriate to the stimulator, and which leads to avoidance or escape behavior. Including agoraphobia. It is indicated to a fear of a particular subject, thing, or situation without that particular thing or situation, having a real, objective risk to the individual [10,11].

Paranoid ideation: Includes the inability to organize thoughts, hostility, suspicion, and fear of loss and hallucinations.

Psychoticism: It refers to the isolation, schizophrenic lifestyle, hallucinations, and loneliness even in the presence of others [8].

Bandelow and Michaelis [12] found that anxiety disorders are the most prevalent rate disorders, above 33.7% of individuals suffered from an anxiety disorder during their lifespan in the 21st century.

About 450 million people suffer from mental and behavioral disorders throughout the world, and a quarter of people will have one or more of these disorders during a period of their lives. It is estimated that neuropsychiatric disorders cause a loss of about 13% of corrected years of life by calculating the periods of disability that result from all diseases and accidents, in various parts of the world, and an increase of about 15% annually by the year 2020. Half of the causes leading to disability and premature death are from mental states. Hence, an appropriate way to reduce the burden caused by these mental disorders is prevention [4].

The results of previous studies indicated the multiplicity of causes of mental disorders. Patel and Jané-Llopis [13] study showed that individuals who live in poor economic and social conditions have more depression and decrease personal and self-wellness. As well as, the results of a study conducted by Musisi, Mollica, and Weiss [14] also revealed that wars cause post-traumatic stress disorder, depression, anxiety, and addiction disorders.

Ali [15], Zahran [16] and Arnout [17] state that the causes of mental disorders are as follows:

1. Biological and physiological causes: sexual puberty without psychological preparation, feeling very tired quickly, inappropriate feeding, poor vision, and abnormal growth of an individual, such as being larger or smaller than normal.

2. Psychological causes: frustrations in front of the environment demands, lack of capabilities, suffering from deprivation and lack of satisfaction of psychological and social needs, emotional immaturity and morale fluctuations, inability to take responsibility and lack of self-confidence, a sense of deficiency, and shame.

3. Social and environmental causes: family disputes, disintegration and divorce, incompatibility family, family, and social stresses, lack of care in the family, school, and society, poor personal and social compatibility, introvertedness, and lack of social interests, etc.

As a result of general perception, that there are no effective preventive or curative means to counter the COVID-19, psychological problems symptoms are increasing such as anxiety, depression, obsessive compulsions, and sensitivity in social relations and others. These symptoms may disappear with the availability of effective prevention means, as well as equal opportunities to care for most groups of society without discrimination among them. For this, it can be said that the societal culture and prevailing concepts about the COVID-19 are basic elements in addition to the above in increasing these pathological symptoms and increasing their outbreak and severity, which shows the need of modern society for complex and slow interventions for prevention and therapy. Hence, the need to study the prevalence of symptoms of mental disorders after the outbreak of the COVID-19, and the differences in these disorders that are due to gender, age group, level of education, to take preventive and curative management of community members. WHO [4] reported that prevention factors include improving an individual's resistance to risk factors and modifying an individual's response to some environmental events surrounding them, such as positive thinking, psychological resilience, social skills, problem-solving, and stress management skills.

COVID-19 Pandemic Crisis and Decision-Making Process

Ordinary decision-making is carried out in normal circumstances where sufficient data are available, based on calm analysis, careful formulation of alternatives, and a deliberate comparison between these alternatives to choose the best alternative from them. As for the pandemic decision, it is an extraordinary decision that is made in exceptional

circumstances that negatively affect what should be made in the normal circumstances for choosing the best alternative among them, and here the goal of pandemic management is to neutralize the negatives and complete adequate data and information that affects the integrity of the decision-making process.

Among the events witnessed in 2020 is the spread of the Coronavirus (COVID-19) by its rapid spread and the increase in the number of infections and the number of deaths in all countries of the world. As a result, the Director-General of the World Health Organization announced on the eleventh of March 2020 that COVID-19 represents Pandemic. Given the seriousness of the results of the Corona pandemic (COVID-19), countries had to intensify their efforts to confront this pandemic, and put plans to manage this crisis to face its severe economic, health, educational and social consequences. That is why state institutions are keen to use various strategies that emphasize participation among workers in these institutions and all members of society, and collective leadership in thinking and implementation, then follow-up and evaluation. And activating these strategies through forming committees, work teams, organizing data on crises, preparing and training individuals to face this pandemic and reducing its destructive effects.

The important and dangerous decisions are made during the management of inflammatory crises and whether the pandemic is internal or external, such as the current COVID-19 pandemic, the important thing is a real risk and complete endorsement of a conflict or a dangerous epidemic, and in such crises that allow only specific times to deal with its changing circumstances and the need for an effective action increases, amid a high degree of suspicion surrounding all the options presented, and under tremendous psychological stress from the possibility of the deteriorating situation and the failure of the whole process, crucial decisions must be taken with a degree of clarity and publicity to reassure public opinion, and here comes a shrewd decision-maker and genius hope when excerpted amid prospects of great failure and full of despair, success in such circumstances is to cross the paper industry and other decisions of the largest and most important.

Another important issue remains, that decisions about COVID-19 are not escaped from reactions of varying degrees from all parties and forces that will be affected by these decisions, negatively or positively, and reactions are a natural and expected issue and studied within the general framework of decision-making. But the important thing in making decisions about COVID-19 is how to prevent others from exploiting reactions and forcing them to their advantage; the other thing is the way to control the reactions of local public opinion that is generally affected by propaganda and rumors and its positions are fluctuating and unbalanced, and as a result, the decision-making process remains about COVID-19 and its issuance is the first step in a continuous cycle, perhaps to issue successive decisions in the light of reactions and the course of events during implementation and confrontation, and the decision-maker has only patience and care and endure difficulties to face every emergency and new, and invent what he deems appropriate and necessary to lead his ship to safety under the coasts of COVID-19 pandemic outbreak.

The current study: The importance of this study becomes clear in the aspect that the prevalence of psychological disorders has increased among people in the twenty-first century and has become dominated by many aspects of their behavior to become the axis around which various studies seek to reduce many aspects of behavior outside the normality. And recently, the rapid outbreak of the COVID-19 and the panic it has caused among individuals of all groups and their feeling that it is killing all of humanity. As well as, the importance of the current study is also to provide recommendations to decision-makers in light of the outbreak of COVID-19.

From the above, It is clear that there is an urgent need for epidemiological studies that aimed to identify the prevalence rates of psychological problems symptoms as a result of the trauma of possible infection with the COVID-19. The current study is considered the first study that seeks to detect the level of psychological problems among individuals after the prevalence of COVID-19, and to determine the differences in psychological problems due to nationality, age, sex, social status, learning level, and income.

METHODOLOGY

Population and Sample

The population of this study includes all individuals residing in the Arab Republic of Egypt and the Kingdom of Saudi Arabia. We chose a randomized sample to consist of 5611(3423 Egyptian and 2188 Saudis), their ages ranged between (16 and more than 50 year). They were divided into sub-groups according to nationality, age, sex, social status, learning level, income level (Figures 1-6).

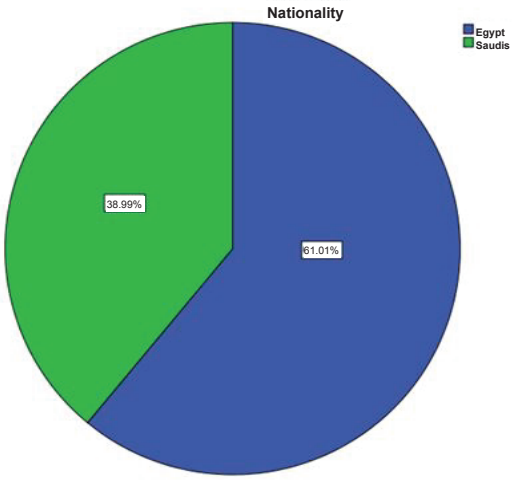

Figure 1 Distribution of the study sample according to nationality

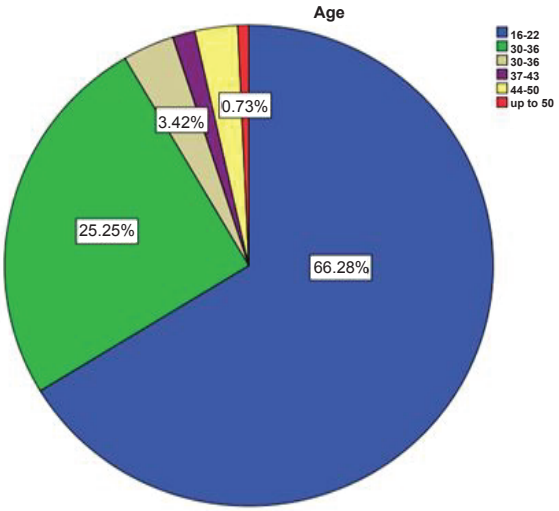

Figure 2 Distribution of the study sample according to age

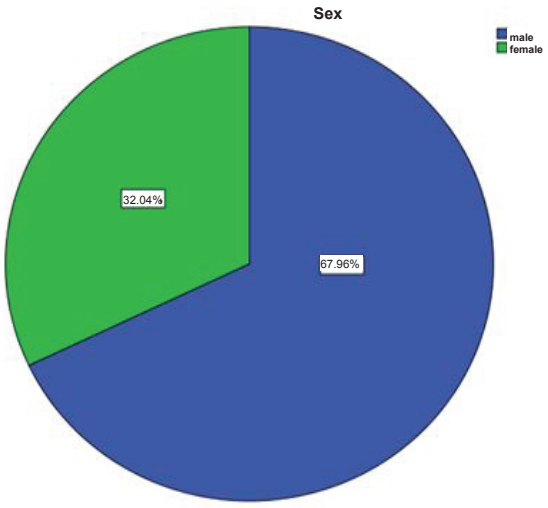

Figure 3 Distribution of the study sample according to sex

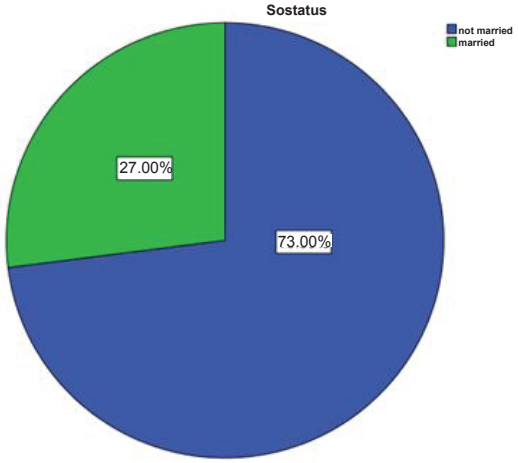

Figure 4 Distribution of the study sample according to social status

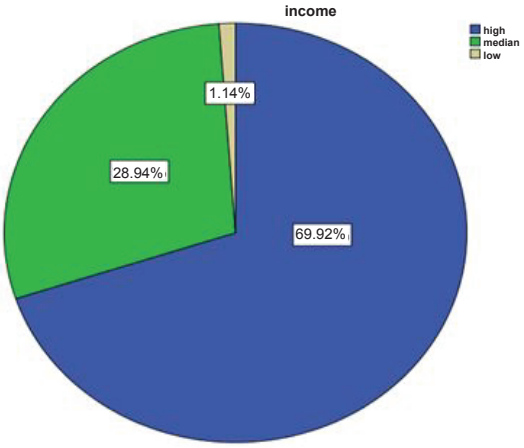

Figure 5 Distribution of the study sample according to income level

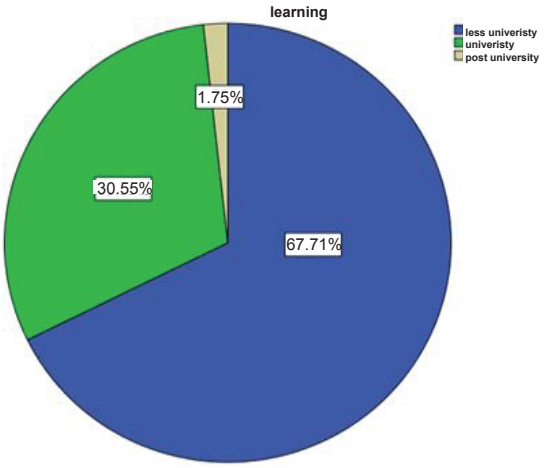

Figure 6 Distribution of the study sample according to learning level

Tools

Psychological problems symptoms inventory (PPSI-45): The list of symptoms includes 45 items, was prepared by the researchers, which consisted of nine dimensions each of them consists of 5 items. The individual responds with a 5-point Likert scale (never=1 to always=5). The validity and reliability of the scale were verified on a sample consisted of (228 Egyptian and 228 Saudis) respondents. The results showed in Tables 1-3 indicates that the symptoms of the psychological problem are validated and reliable.

Table 1 Correlations between psychological problems symptoms items for Egyptian Sample

Item	r	Item	r	Item	r	Item	r	Item	r	Item	r	Item	r	Item	r	Item	r
1	0.701	6	0.625	11	0.69	16	0.662	21	0.514	26	0.562	31	0.618	36	0.695	41	0.65
2	0.719	7	0.657	12	726	17	0.734	22	0.597	27	0.826	32	0.846	37	0.803	42	0.826
3	0.888	8	0.779	13	0.72	18	0.715	23	0.82	28	0.82	33	0.784	38	0.79	43	0.83
4	0.775	9	0.644	14	0.652	19	0.779	24	0.716	29	0.702	34	0.789	39	0.726	44	0.869
5	0.704	10	0.737	15	0.575	20	0.546	25	0.723	30	0.598	35	0.642	40	0.818	45	0.67

Table 2 Correlations between psychological problems symptoms items for Saudis sample

Item	r	Item	r	Item	r	Item	r	Item	r	Item	r	Item	r	Item	r	Item	r
1	0.685	6	0.635	11	0.701	16	0.704	21	0.526	26	0.552	31	0.603	36	0.709	41	0.628
2	0.771	7	0.645	12	0.718	17	0.737	22	0.566	27	0.83	32	0.845	37	0.8	42	0.828
3	0.894	8	0.822	13	0.691	18	0.742	23	0.807	28	0.824	33	0.778	38	0.786	43	0.825
4	0.77	9	0.665	14	0.626	19	0.788	24	0.704	29	0.734	34	0.798	39	0.741	44	0.881
5	0.679	10	0.751	15	0.572	20	0.57	25	0.714	30	0.572	35	0.68	40	0.804	45	0.672

From the results shown in Tables 1 and 2, we noticed that the psychological problems symptoms inventory items are related significantly to their dimension, that mean this scale is characterized by internal consistency.

Table 3 Cronbach's Alpha coefficients for the symptoms of the psychological problem

Dimensions	Alpha-Cronbach	
	Egyptian Sample	Saudis Sample
Dis1	0.811	0.815
Dis 2	0.715	0.735
Dis 3	0.732	0.7
Dis 4	0.789	0.74
Dis 5	0.8	0.803
Dis 6	0.787	0.742
Dis 7	0.809	0.793
Dis 8	0.82	0.822
Dis 9	0.819	0.814

The findings showed in Table 3 about the Cronbach's Alpha coefficients for the psychological problems, indicated that the scale of psychological problems is reliable.

Research Design

To detect the effect of the outbreak of the deadly COVID-19 on the mental health of individuals, a survey descriptive

design was used in this study to detect the level of psychological problems symptoms and to determine the differences in psychological problems due to nationality, age, sex, social status, learning level, and income. The psychological problems symptoms inventory-45 has been applied to a random sample from Egyptian and Saudis, online, 5611 individuals have responded to the inventory and sent it back to the researchers.

Data Analysis

The data collected from the study sample were analyzed by using SPSS 25.0, Mean, Standard Deviation, t-test and one-way ANOVA were calculated.

RESULTS

The results about psychological problems symptoms levels in the total sample: To determine the prevalence of symptoms of mental disorders among the individuals of the study sample, t-test value of one sample was calculated to detect the differences between the hypothetical mean and the mean scores of the individuals in the symptoms of mental disorders. The results are shown in Table 4.

Table 4 One-sample statistics

Dimensions	M	SD	t	Sig. (2-tailed)
Dis1	16.4104	3.80767	27.747	0
Dis2	17.0772	3.29894	47.165	0
Dis3	16.9291	3.24638	44.511	0
Dis4	17.3441	2.96878	59.146	0
Dis5	17.7544	2.9537	69.853	0
Dis6	17.5548	3.0255	63.253	0
Dis7	17.2115	3.1533	52.535	0
Dis8	17.6423	3.58416	55.223	0
Dis9	17.7343	3.26224	27.747	0

The results shown in Table 4 and Figures 7-15 indicate the high prevalence of psychological problems symptoms among the study sample. The differences in one sample were statistically significant at level (0. 01).

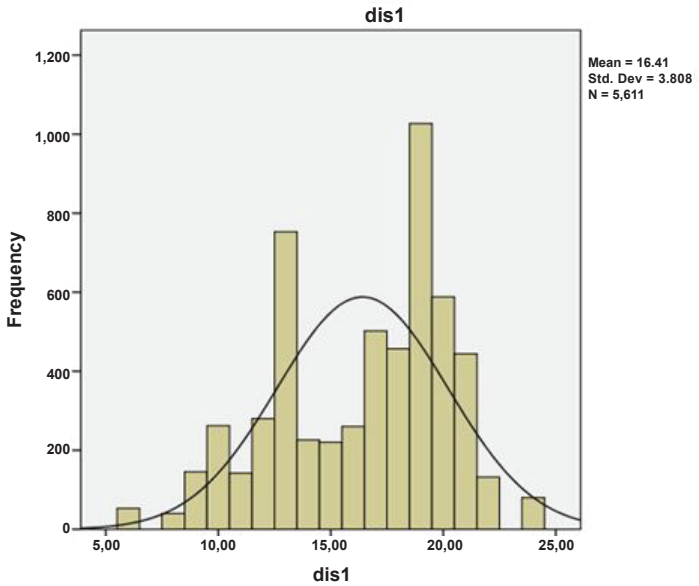

Figure 7 Histogram of the somatization outbreak among study sample

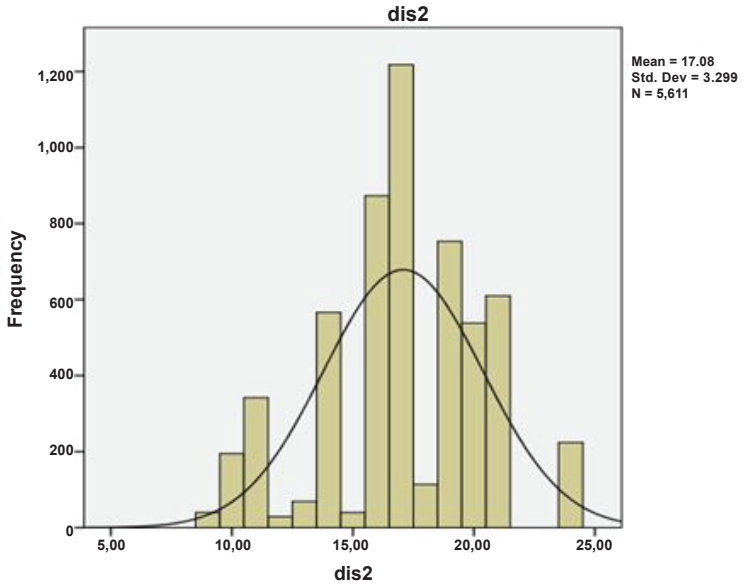

Figure 8 Histogram of the obsessive-compulsive disorder outbreak among study sample

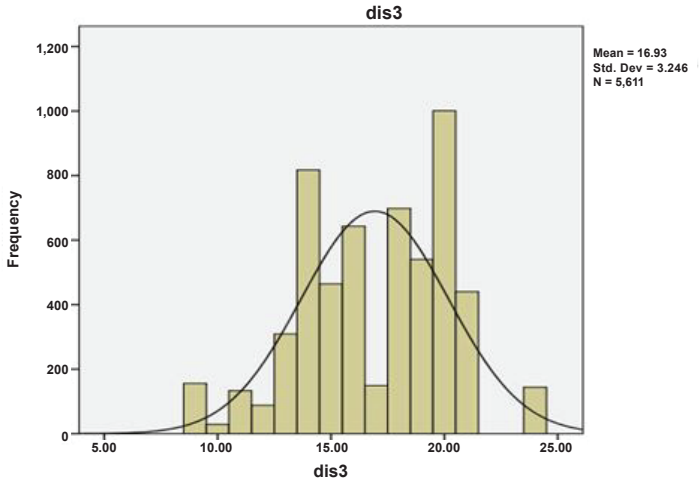

Figure 9 Histogram of the interpersonal sensitivity outbreak among study sample

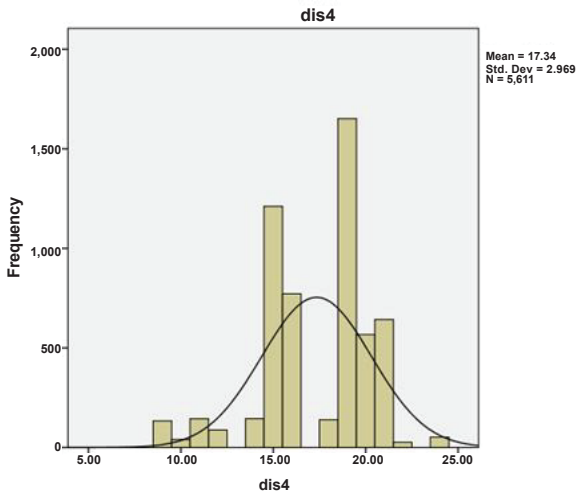

Figure 10 Histogram of the depression outbreak among study sample

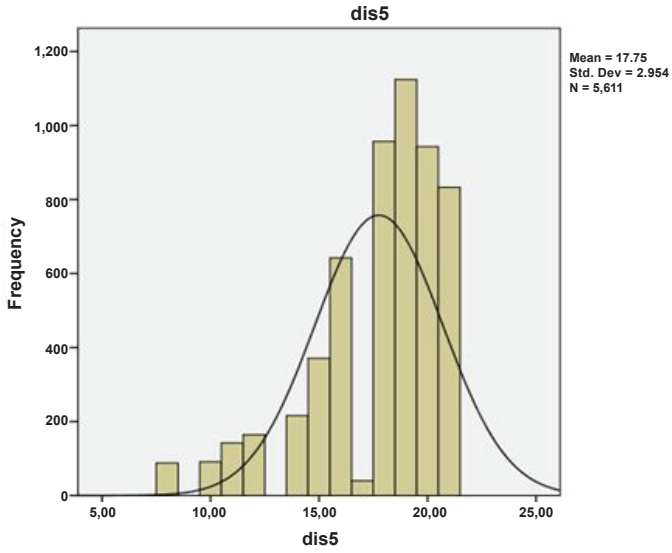

Figure 11 Histogram of the anxiety outbreak among study sample

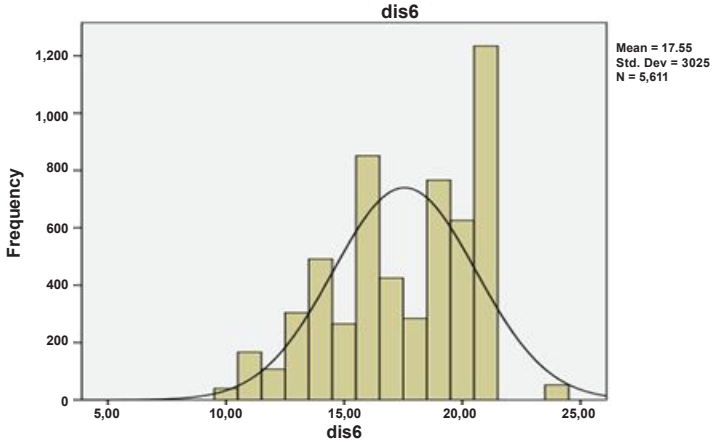

Figure 12 Histogram of the hostility outbreak among study sample

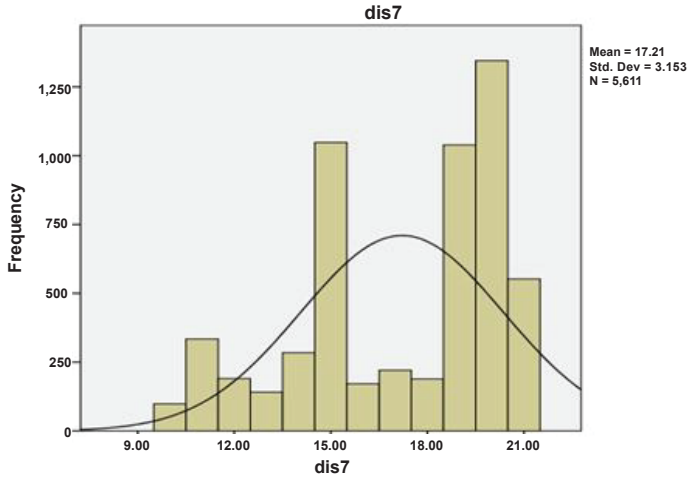

Figure 13 Histogram of the phobia outbreak among study sample

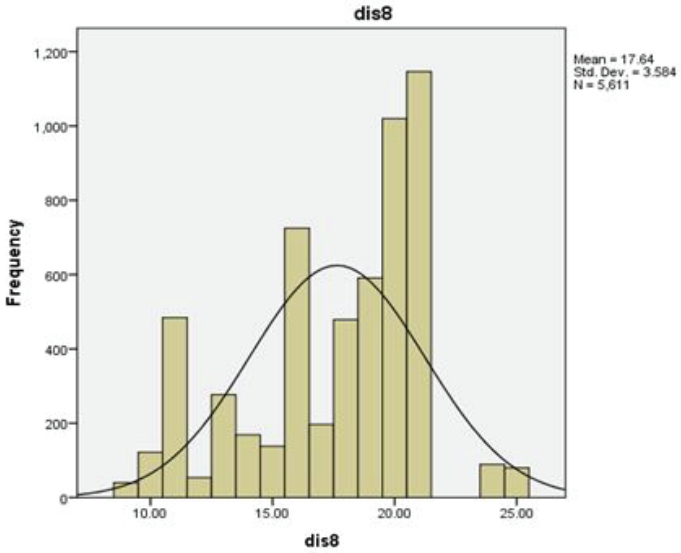

Figure 14 Histogram of the paranoid ideation outbreak among study sample

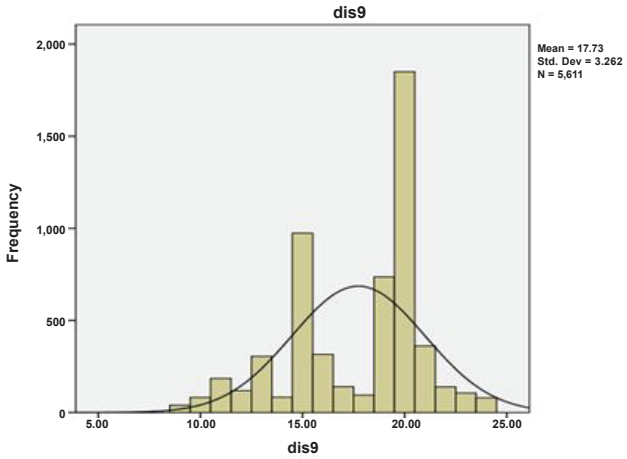

Figure 15 Histogram of the psychoticism outbreak among study sample

The results about the differences in psychological problems due to nationality: the independent- samples t-test calculated to detect the difference between Egyptian and Saudis in the psychological problems. The findings are shown in Table 5.

Table 5 Differences between Egyptian and Saudis in the psychological problems

Variables	Nationality	N	M	SD	t	Sig. (2-tailed)
dis1	Egyptian	3423	16.3812	3.81189	0.719	0.472
	Saudis	2188	16.4561	3.80147		
dis2	Egyptian	3423	17.0561	3.31042	0.6	0.549
	Saudis	2188	17.1101	3.28138		
dis3	Egyptian	3423	16.9205	3.27354	0.247	0.805
	Saudis	2188	16.9424	3.20413		

dis4	Egyptian	3423	17.3307	2.97818	0.425	0.671
	Saudis	2188	17.3652	2.95456		
dis5	Egyptian	3423	17.7309	2.9638	0.746	0.456
	Saudis	2188	17.7911	2.93813		
dis6	Egyptian	3423	17.5551	3.04118	0.008	0.993
	Saudis	2188	17.5544	3.00149		
dis7	Egyptian	3423	17.2048	3.16031	0.201	0.841
	Saudis	2188	17.2221	3.14299		
dis8	Egyptian	3423	17.6486	3.57667	0.163	0.871
	Saudis	2188	17.6325	3.59664		
dis9	Egyptian	3423	17.7628	3.24759	0.718	0.414
	Saudis	2188	17.6897	3.28527		

From the results showed in Table 5, we note that there are no differences between Egyptian and Saudis in psychological problems.

The results about the differences in psychological problems due to sex: the independent-samples t-test calculated to detect the difference between males and females in the psychological problems. The findings are shown in Table 6.

Table 6 Differences between males and females in the psychological problems

Variables	Sex	N	M	SD	t	Sig. (2-tailed)
dis 1	Males	3813	16.4398	3.8089	0.842	0.4
	Females	1798	16.3482	3.80537		
dis 2	Males	3813	17.1094	3.30559	1.067	0.286
	Females	1798	17.0089	3.28466		
dis 3	Males	3813	16.9788	3.24107	1.667	0.096
	Females	1798	16.8237	3.25601		
dis 4	Males	3813	17.3611	2.95984	0.622	0.534
	Females	1798	17.3081	2.98813		
dis 5	Males	3813	17.7931	2.92768	1.414	0.157
	Females	1798	17.6724	3.00732		
dis 6	Males	3813	17.5804	3.02632	0.923	0.356
	Females	1798	17.5006	3.02388		
dis 7	Males	3813	17.2248	3.14407	0.455	0.649
	Females	1798	17.1835	3.17347		
dis 8	Males	3813	17.6958	3.56167	1.616	0.106
	Females	1798	17.5289	3.62978		
dis 9	Males	3813	17.7629	3.2528	0.955	0.34
	Females	1798	17.6735	3.28225		

From the results showed in Table 6, we note that there are no differences between males and females in psychological problems.

The results about the differences in psychological problems due to social status: the independent-samples t-test calculated to detect the difference between married and not married in the psychological problems. The findings are shown in Table 7.

Table 7 Differences between married and not married in the psychological

Variables	Social Status	N	M	SD	t	Sig. (2-tailed)
dis 1	Not Married	4096	16.4175	3.80925	0.228	0.82
	Married	1515	16.3914	3.80458		
dis 2	Not Married	4096	17.0723	3.31506	0.185	0.854
	Married	1515	17.0904	3.25599		
dis 3	Not Married	4096	16.9282	3.25013	0.032	0.974
	Married	1515	16.9314	3.2373		
dis 4	Not Married	4096	17.3535	2.98225	0.392	0.695
	Married	1515	17.3188	2.93287		
dis 5	Not Married	4096	17.7734	2.94847	0.791	0.429
	Married	1515	17.703	2.96816		
dis 6	Not Married	4096	17.5715	3.03432	0.684	0.494
	Married	1515	17.5096	3.00205		
dis 7	Not Married	4096	17.2124	3.15266	0.033	0.973
	Married	1515	17.2092	3.15608		
dis 8	Not Married	4096	17.6755	3.56704	1.133	0.257
	Married	1515	17.5525	3.6297		
dis 9	Not Married	4096	17.7493	3.24684	0.562	0.574
	Married	1515	17.6937	3.30424		

The results showed in Table 7, indicated that there are no differences between married and not married in psychological problems.

The results about the differences in psychological problems due to age: one-way ANOVA calculated to detect the differences in the psychological problems due to age. The findings are shown in Tables 8-10.

Table 8 Descriptive

Variable		N	M	SD
dis 1	16-22	3719	16.4232	3.80438
	30-36	1417	16.4764	3.77674
	30-36	192	15.9323	4.27223
	37-43	84	15.5952	3.64086
	44-50	158	16.4494	3.62853
	up to 50	41	16.7317	3.7485
	Total	5611	16.4104	3.80767
dis 2	16-22	3719	17.099	3.29904
	30-36	1417	17.156	3.22032
	30-36	192	16.3281	3.86847
	37-43	84	16.2976	3.13465
	44-50	158	17.1519	3.1927
	up to 50	41	17.1951	3.38541
	Total	5611	17.0772	3.29894

dis 3	16-22	3719	16.9484	3.24216
	30-36	1417	16.9809	3.21131
	30-36	192	16.2813	3.59378
	37-43	84	16.2262	3.10596
	44-50	158	17	3.28672
	up to 50	41	17.5854	2.87207
	Total	5611	16.9291	3.24638
dis 4	16-22	3719	17.366	2.96514
	30-36	1417	17.3832	2.87534
	30-36	192	16.6875	3.63178
	37-43	84	17.369	2.99711
	44-50	158	17.2785	2.99442
	up to 50	41	17.2927	2.68555
	Total	5611	17.3441	2.96878
dis 5	16-22	3719	17.7782	2.94544
	30-36	1417	17.7918	2.90499
	30-36	192	17.1615	3.29842
	37-43	84	17.2976	3.14616
	44-50	158	17.6962	3.06554
	up to 50	41	18.2439	2.56691
	Total	5611	17.7544	2.9537
dis 6	16-22	3719	17.58	3.01912
	30-36	1417	17.5632	2.97952
	30-36	192	17.1615	3.43678
	37-43	84	17.3214	2.96632
	44-50	158	17.5063	3.05938
	up to 50	41	17.4878	3.15533
	Total	5611	17.5548	3.0255
dis 7	16-22	3719	17.207	3.15438
	30-36	1417	17.2745	3.08955
	30-36	192	16.8958	3.43215
	37-43	84	16.9286	3.53225
	44-50	158	17.2152	3.17703
	up to 50	41	17.4878	3.0259
	Total	5611	17.2115	3.1533
dis 8	16-22	3719	17.6765	3.55847
	30-36	1417	17.6097	3.599
	30-36	192	17.2656	4.03353
	37-43	84	17.381	3.76062
	44-50	158	17.5633	3.50874
	up to 50	41	18.2683	3.06614
	Total	5611	17.6423	3.58416

dis 9	16-22	3719	17.7607	3.24361
	30-36	1417	17.6937	3.27496
	30-36	192	17.4271	3.74094
	37-43	84	17.7738	2.97115
	44-50	158	17.7722	3.21996
	up to 50	41	17.9512	2.91506
	Total	5611	17.7343	3.26224

Table 9 ANOVA

Variable		Sum of Squares	df	Mean Square	F	Sig.
dis 1	Between Groups	110.956	5	22.191	1.531	0.176
	Within Groups	81224.792	5605	14.491		
	Total	81335.748	5610			
dis 2	Between Groups	170.786	5	34.157	3.145	0.008
	Within Groups	60882.799	5605	10.862		
	Total	61053.585	5610			
dis 3	Between Groups	145.73	5	29.146	2.77	0.017
	Within Groups	58978.039	5605	10.522		
	Total	59123.769	5610			
dis 4	Between Groups	87.56	5	17.512	1.989	0.077
	Within Groups	49356.895	5605	8.806		
	Total	49444.455	5610			
dis 5	Between Groups	99.473	5	19.895	2.283	0.044
	Within Groups	48844.105	5605	8.714		
	Total	48943.578	5610			
dis 6	Between Groups	37.296	5	7.459	0.815	0.539
	Within Groups	51314.602	5605	9.155		
	Total	51351.898	5610			
dis 7	Between Groups	34.69	5	6.938	0.698	0.625
	Within Groups	55747.201	5605	9.946		
	Total	55781.892	5610			
dis 8	Between Groups	55.891	5	11.178	0.87	0.5
	Within Groups	72011.225	5605	12.848		
	Total	72067.116	5610			
dis 9	Between Groups	25.331	5	5.066	0.476	0.795
	Within Groups	59677.468	5605	10.647		
	Total	59702.8	5610			

The results showed in Table 9, indicated that there are no differences due to age in psychological problems except Obsessive-compulsive. To determine the direction of these differences, a Scheffe test was used (Table 10). As the results indicate that the differences in obsessions were in the interest of the sample members belonging to the age group 50 years and over.

Table 10 The results of Scheffe test for the differences in obsessions due to age

Age	N	Subset for alpha=0.05
		1
30-36	192	17.1615
37-43	84	17.2976
44-50	158	17.6962
16-22	3719	17.7782
30-36	1417	17.7918
up to 50	41	18.2439
Sig.		0.142

The results about the differences in psychological problems due to learning level: one-way ANOVA calculated to detect the differences in the symptoms of the psychological problem due to learning level. The findings are shown in Tables 11-13.

Table 11 Descriptive

Variables		N	M	SD
dis 1	Less University	3799	16.4296	3.80062
	University	1714	16.3973	3.80527
	Post University	98	15.898	4.11557
	Total	5611	16.4104	3.80767
dis 2	Less University	3799	17.1013	3.29072
	University	1714	17.0578	3.30095
	Post University	98	16.4796	3.55002
	Total	5611	17.0772	3.29894
dis 3	Less University	3799	16.9518	3.23847
	University	1714	16.9055	3.25997
	Post University	98	16.4592	3.30937
	Total	5611	16.9291	3.24638
dis 4	Less University	3799	17.3664	2.95472
	University	1714	17.3139	2.96793
	Post University	98	17.0102	3.49224
	Total	5611	17.3441	2.96878
dis 5	Less University	3799	17.7802	2.9387
	University	1714	17.7275	2.98016
	Post University	98	17.2245	3.04445
	Total	5611	17.7544	2.9537
dis 6	Less University	3799	17.5936	3.01106
	University	1714	17.486	3.0455
	Post University	98	17.2551	3.22142
	Total	5611	17.5548	3.0255
dis 7	Less University	3799	17.2232	3.15096
	University	1714	17.2042	3.13712
	Post University	98	16.8878	3.52278
	Total	5611	17.2115	3.1533
dis 8	Less University	3799	17.6789	3.55089
	University	1714	17.5706	3.64652
	Post University	98	17.4796	3.77793
	Total	5611	17.6423	3.58416

dis 9	Less University	3799	17.7657	3.2421
	University	1714	17.6628	3.29208
	Post University	98	17.7653	3.52254
	Total	5611	17.7343	3.26224

Table 12 ANOVA

Variables		Sum of Squares	df	Mean Square	F	Sig.
dis 1	Between Groups	27.426	2	13.713	0.946	0.388
	Within Groups	81308.322	5608	14.499		
	Total	81335.748	5610			
dis 2	Between Groups	37.861	2	18.931	1.74	0.176
	Within Groups	61015.724	5608	10.88		
	Total	61053.585	5610			
dis 3	Between Groups	24.559	2	12.28	1.165	0.312
	Within Groups	59099.21	5608	10.538		
	Total	59123.769	5610			
dis 4	Between Groups	14.382	2	7.191	0.816	0.442
	Within Groups	49430.074	5608	8.814		
	Total	49444.455	5610			
dis 5	Between Groups	31.285	2	15.643	1.794	0.166
	Within Groups	48912.293	5608	8.722		
	Total	48943.578	5610			
dis 6	Between Groups	22.628	2	11.314	1.236	0.291
	Within Groups	51329.27	5608	9.153		
	Total	51351.898	5610			
dis 7	Between Groups	10.884	2	5.442	0.547	0.579
	Within Groups	55771.007	5608	9.945		
	Total	55781.892	5610			
dis 8	Between Groups	16.486	2	8.243	0.642	0.526
	Within Groups	72050.63	5608	12.848		
	Total	72067.116	5610			
dis 9	Between Groups	12.615	2	6.307	0.593	0.553
	Within Groups	59690.185	5608	10.644		
	Total	59702.8	5610			

The results showed in Table 12, indicated that there are no differences due to the learning level in all psychological problems symptoms.

The results about the differences in psychological problems symptoms due to income level: one-way ANOVA calculated to detect the differences in the symptoms of the psychological problem due to income level. The findings are shown in Tables 13 and 14.

Table 13 Descriptive

Variables		N	M	SD
dis 1	High	3923	16.4277	3.79028
	Median	1624	16.4076	3.82892
	Low	64	15.4219	4.24191
	Total	5611	16.4104	3.80767
dis 2	High	3923	17.0981	3.28368
	Median	1624	17.0702	3.30182
	Low	64	15.9688	3.964
	Total	5611	17.0772	3.29894

dis 3	High	3923	16.935	3.23294
	Median	1624	16.9624	3.267
	Low	64	15.7188	3.364
	Total	5611	16.9291	3.24638
dis 4	High	3923	17.3609	2.96671
	Median	1624	17.3362	2.94982
	Low	64	16.5156	3.46864
	Total	5611	17.3441	2.96878
dis 5	High	3923	17.7713	2.95038
	Median	1624	17.7463	2.93023
	Low	64	16.9219	3.61349
	Total	5611	17.7544	2.9537
dis 6	High	3923	17.5725	3.01619
	Median	1624	17.5382	3.03132
	Low	64	16.8906	3.39989
	Total	5611	17.5548	3.0255
dis 7	High	3923	17.2159	3.15962
	Median	1624	17.2087	3.13372
	Low	64	17.0156	3.3022
	Total	5611	17.2115	3.1533
dis 8	High	3923	17.6773	3.5564
	Median	1624	17.5924	3.6395
	Low	64	16.7656	3.79114
	Total	5611	17.6423	3.58416
dis 9	High	3923	17.7561	3.24157
	Median	1624	17.7192	3.29603
	Low	64	16.7813	3.56112
	Total	5611	17.7343	3.26224

Table 14 ANOVA

Variables		Sum of Squares	df	Mean Square	F	Sig.
dis 1	Between Groups	63.731	2	31.865	2.199	0.111
	Within Groups	81272.017	5608	14.492		
	Total	81335.748	5610			
dis 2	Between Groups	80.434	2	40.217	3.699	0.025
	Within Groups	60973.151	5608	10.873		
	Total	61053.585	5610			
dis 3	Between Groups	95.698	2	47.849	4.546	0.011
	Within Groups	59028.071	5608	10.526		
	Total	59123.769	5610			
dis 4	Between Groups	45.142	2	22.571	2.562	0.077
	Within Groups	49399.313	5608	8.809		
	Total	49444.455	5610			
dis 5	Between Groups	45.592	2	22.796	2.614	0.073
	Within Groups	48897.987	5608	8.719		
	Total	48943.578	5610			
dis 6	Between Groups	29.913	2	14.956	1.634	0.195
	Within Groups	51321.985	5608	9.152		
	Total	51351.898	5610			
dis 7	Between Groups	2.544	2	1.272	0.128	0.88
	Within Groups	55779.348	5608	9.946		
	Total	55781.892	5610			

dis 8	Between Groups	58.04	2	29.02	2.26	0.104
	Within Groups	72009.076	5608	12.84		
	Total	72067.116	5610			
dis 9	Between Groups	60.358	2	30.179	2.838	0.059
	Within Groups	59642.442	5608	10.635		
	Total	59702.8	5610			

The results showed in Table 14, indicated that there are no differences due to income level in all psychological problems symptoms except depression and interactive sensitivity to others. To determine the direction of these differences, a Scheffe test was used (Tables 15 and 16). As the results (Table 16) indicate that the differences in depression were in favor of the high and median income level, these results mean that the high and median income level was high in depression. Also, the differences in interactive sensitivity were in favour of higher and median income level, this indicates that the high and median income level is more interactive sensitivity (Table 16).

Table 15 The results of Scheffe test for the differences in depression due to income level

Income	N	Subset for alpha=0.05	
		1	2
Low	64	15.9688	
Median	1624		17.0702
High	3923		17.0981
Sig.		1.000	0.997

Table 16 The results of Scheffe test for the differences in interactive Sensevity due to income level

Income	N	Subset for alpha=0.05	
		1	2
Low	64	15.7188	
High	3923		16.935
Median	1624		16.9624
Sig.		1	0.997

DISCUSSION

The findings of the present study indicated that the symptoms of the psychological problem prevalence were high among the study sample due to the outbreak of the COVID-19 pandemic. These findings are consistent with what the researchers pointed out that stress has many causes such as exposure to an infection or undergoing surgery, or exposure to environmental pollutants as heavy metals, toxins and minerals, exposure to noise, radiation, and COVID-19. The results are also consistent with the findings of a study conducted by Lee, et al. [18] that the outbreak of SARS increased the symptoms of stress post-traumatic disorder, and with the Yang, et al. [19] findings that found a low level of the mental health status among medical workers in SARS.

Diseases that may affect a person are considered to be among the types of stress that scientists have identified, and they called them episodic stresses, and if these stresses persist without effective coping, they cause psychological disturbances for the individual, such as long periods of moderate-intensity depression, anxiety disorder, frustration, general anxiety disorders, persistent physical symptoms, Coronary arteries, and other heart disorders.

The outbreak of the dangerous COVID-19 epidemic in all countries of the world has increased psychological stress: stresses that relate to fear, frustration, sadness, grief, anxiety, feelings of sin and shame, jealousy, and criticism of machines. Also, the rapid outbreak of the COVID-19 may increase the physical pressures on individuals, and increase the requirements of the virus prevention measures, as well as the financial burdens of therapy for those who contract it. Likewise, psycho-social stresses in various relationships: work, marital life, lack of social support, lack of resources for a safe life, potential for job loss, the potential for individual savings, the death of a relative due to this deadly

virus. This is in addition to the increasing psychological-spiritual stresses, including an imbalance in values, a lack of complacency, failure to perform positive or meaningful tasks and not accomplishing them, which causes a lack of psychological well-being for individuals. And if these stresses caused by the outbreak of the Corona epidemic are not managed properly, these cause health risks to humans, both physical and psychological, and this is the result of the findings of this study of such as depression, anxiety, obsessive-compulsive disorder, paranoia, interactive allergies and other symptoms of mental disorders. When the mood of the individual is affected, it causes satisfactory physical symptoms that appear on the person, such as headache, heart palpitations, physical pain, sore throat, problems with swallowing or breathing, nausea, fatigue, blocking crises, and high blood pressure.

The fears of being infected with the COVID-19 do not protect individuals from the bad things that will befall to them, rather it ruins them from enjoying the moment and the present. Unless individuals have evidence of infection with the virus, pay attention to what their sly mind dictates to them. If confirmation of the occurrence of infection with COVID-19 is established, there are many ways to coexist with it, and life without worry.

As a result of the multiple stresses imposed by the escalating outbreak of the Corona epidemic, from increasing physical, social, professional, and spiritual stresses, all members of the study, regardless of gender, nationality, level of learning, marital status, and age have high levels of psychological problems following the outbreak of the COVID-19.

In addition to all of the above, other causes have led to an increase in symptoms of mental disorders following the wide outbreak of COVID-19. The media's loud voice about the outbreak of the deadly COVID-19 and intimidation of the disease to the extent that we work daily to update our information about the numbers of infected people and their cities in the world increased in individuals in various countries of the world fear of infection of Corona Virus more than fear of infection with any serious disease, including cancer. On the other hand, individuals seemed to exaggerate the hygiene and excessive caution in the infection, which increased the prevalence of the obsessive-compulsive disorder, in light of what we find today of intense awareness of hygiene and the outbreak of masks and antiseptics may be a healthy indicator for the prevention of coronavirus infection, but there is another aspect that should not be overlooked and it is the danger of turning attention to hygiene into an obsession of compulsive fears and the ability of some to become the subject of hygiene is an obsession that disturbs his mind at all moments, then things will run no less dangerous than Corona Virus.

Our exaggeration in guiding others and permanently warning them about the topic of cleanliness leads some to cross its natural limits to fall easy prey to the dictates of Obsessive-Compulsive Disorder (OCD), which is difficult to break from. Do not be surprised that some people refrain from shaking hands with others, sterilize his hand from everything he touches, take many hours scrubbing the hand and washing it, and his preoccupation with his mission in life becomes washed his hand, and these are the most prominent manifestations of OCD. And when one suffers from obsessive-compulsive disorder, his main concern is to get rid of the obsessive-compulsive nightmare burning for the energy of the soul instead of protecting himself from "corona".

Mankind has exposure to many epidemic diseases, but individuals have not treated them with the degree of intimidation, as happened recently. As well as, these findings stressed on the need to increase the numbers of psychological and social service providers in all societies to meet the needs of the members of the community, and the need to train them on modern and appropriate methods to provide these psychological services in effective ways. The results may also loom on the horizon the importance of counseling and psychotherapy across cultures in light of the need for online counseling and the need to reduce opportunities for direct interactions between individuals. In sum, if the ministries of health are concerned with intensifying the prevention of organic diseases, do not forget that they must also intensify the prevention of psychological disorders caused by the outbreak of the deadly COVID-19.

Based on the above findings, we provide several important recommendations to the decision-makers, as follows:

1. The necessity of having sufficient experience and information necessary for the decision-maker on the subject of the COVID-19 outbreak pandemic
2. Forming a pandemic cell that includes those with expertise and experience in the subject of the COVID-19 pandemic
3. Use the help of scientific research centers and academic universities, and take the results of their studies and research into the COVID-19 pandemic

4. Directing all media outlets to reassure public opinion regarding the COVID-19 pandemic and not to overstate the matter
5. The decision-makers need the cooperation of public opinion and their positive interaction with their decisions, and this depends on the degree of awareness of public opinion on the one hand, and their confidence in the decision-makers on the other hand
6. The decision-makers should benefit from the experiences of other countries that pass or have gone through the same pandemic (COVID-19), in addition to enhancing cooperation with them to contain the pandemic and control it if it is unable to solve it internally, as is the case in the pandemic of the outbreak of COVID-19 worldwide
7. Harnessing all human and material efforts and capabilities to solve the issue of the COVID-19 pandemic and giving it the highest priority

LIMITATIONS AND FUTURE DIRECTIONS

The limitations of this study include that it applied a survey cross-sectional design, which precludes predictability about causality and the direction of effects behind the increasing psychological problems. It was also conducted on individuals residing in Egypt and Saudi Arabia, and therefore we need more future epidemiological studies to know the level of prevalence of symptoms of mental disorders in other Arab and foreign countries and study the differences in prevalence rates for these disorders resulting from the successive outbreak of the COVID-19 pandemic.

CONCLUSION

The study results emphasized the increasing role of counseling and psychotherapy, and on the other hand, the increased stresses confront the professional psychological service providers in these dangerous current conditions faced by the entire world. Based on these results some implications may be drawn, it is necessary to take preventive and psychological therapy methods for members of society and to provide distinguished psychological services that meet their needs. Also, these results increase the role of counseling via the internet, in light of the current conditions in societies, including isolation and quarantine for individuals who being infected by COVID-19, as well as preventive methods to reduce opportunities for direct social communication face to face between individuals.

The findings of this study indicate the need for specialists in psychological counseling and psychotherapy and those responsible for psychological service centers to prepare and plan counseling and psychological therapy programs via the internet for community members who suffer from symptoms of mental disorders resulting from the increasing outbreak of the COVID-19, and provide psychological services to patients with the COVID-19 to face the stress of infection with this deadly virus and to recover from serious physical and psychological symptoms.

DECLARATIONS

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Conflicts of Interest

The authors declared no potential conflicts of interest concerning the research, authorship, and/or publication of this article.

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