

**PREVALENCE OF ANXIETY AND DEPRESSION AMONG AL
MADINAH AL MUNAWARAH POPULATION, KINGDOM OF SAUDI
ARABIA, 2016/2017**

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ABSTRACT

Background: Depression and anxiety have become common issues around the world, and affecting a significant number of people. This study aimed to estimate the current incidence of anxiety and depression among Al Madinah population. **Methods:** A cross-sectional study was carried out in Al Rashid mall, Al-Madinah Al-Monawarah, Kingdom of Saudi Arabia. This study included 349 male and female participants in different age groups. Data were collected using questionnaire in Arabic copy. T. The questionnaire was categorized into four parts, the first part was about demographic questions, and the second part was Beck Depression Inventory (BDI), while third part was Penn State

Worry Questionnaire (PSWQ), in addition to fourth part that was the approval of participate. Statistical Package for the Social Sciences (SPSS) version 20 for Windows, was used for data entry and statistical analysis. **Results:** The present study included 79.4% females and 20.6% males, their age ranged between 15- more than 40. The average of the total depression of the participants was (13.3) with a standard deviation (8.764) and Relative Weight (21.1%), the classification of depression among the sample was (mild depression). The relative weight of worry was 60%, and its general level was medium. **Conclusion:** The evaluation of depression severity among Al Madinah population is mild depression. While, the level of anxiety among Al Madinah population is medium.

KEYWORDS: Depression and anxiety.

1. INTRODUCTION

Anxiety and depression are closely related emotions.^[1] These psychiatric disorders are associated with a significant increased morbidity and mortality.^[2] As well as they are among the most common disorders existing in medical practice.^[3] But, anxiety and depression have been found to be significantly higher among women compared to men.^[4]

Anxiety and depression can be normal responses to life events or abnormally severe, persistent or all-pervasive.^[1,4] There are several psychosocial risk factors for anxiety disorders and depression such as; chronic illness, cognitive dysfunction, poor health perception, female gender, functional limitations, weak coping strategies and personality traits such as neuroticism.^[4,6]

Diagnoses of anxiety and depression tend to co-occur, and their symptoms are correlated highly.^[7] Both of anxiety and depression are accompanied by an assortment of psychological and physical symptoms. The physical symptoms are mediated by psychophysiological changes. so, anxiety causes elevation of the pulse rate, salivation decreased, augment of muscle activity and raising of corticosteroids and adrenal catecholamines. While, the psychophysiology is more complex in depression, because in depression the physical changes themselves are more variable, poorly understood and often extreme.^[1]

Such psychiatric disorders have poor health outcomes, and this matter is increasing. For example, suicide is now at its highest level in 30 years in the U.S.^[2] In addition to, anxiety and depression affect a lot of people during their young adulthood, which is a fundamental stage for productivity.^[8] Thus anxiety and depression are affecting the health, professional and economic future of communities.

Depression is highly prevalent and usually associates other conditions, so it eventually leads to high medical and societal costs.^[9,10] and sometimes, even if depression is diagnosed, the care provided for the patient gets corrupted by various ways. Meaning that a big number of patients even though their diagnosis is established, sometimes they do not go hand in hand with the treatment plan, or maybe the care provided is not convenient or sufficient for them, so the management is not implemented successfully. Moreover, many patients who start treatment do not complete an appropriate course of treatment.^[10]

The studies found a great variation in the prevalence of depression around the world (9–33%).^[5] But, it is estimated that 350 million persons suffer from depression around the world.^[11] In KSA, anxiety and depression rates are ranged between 16 and 40%.^[6] The World Health Organization (WHO) estimated that major depression caused more disability around the world.^[10] The Global Burden of Disease study predicted that depressive disorders would be the main cause of disability by 2020 because of their significant impact on the performance and quality of life.^[11]

According to the mentioned above, also on top of that the fact that research regarding this psychological field in Saudi Arabia is very poor compared to the other countries, and in order to know how to face the problem, we need to measure the size of the problem in the country, in order to carry out the suitable interventions in the future. Hence, this study was conducted to measure the current incidence of anxiety and depression in the selected random group, in Al-Madinah city population.

2. MATERIALS AND METHODS

2.1. Study design and setting

This study was conducted through a cross-sectional analytical survey in Al Rashid mall, Al-Madinah Al-Munawwarah, Kingdom of Saudi Arabia. To explore the prevalence of depression and anxiety in Al-Madinah Al-Munawwarah, Kingdom of Saudi Arabia.

2.2. Study population and sampling

The subjects of this study were from Al-Madinah population during the year 2016-2017.

2.3. Excluded criteria

- Persons with confirmed record of mental illness.
- Persons younger than 15 years old.

2.4. Sample size

All the eligible participants who responded to the invitation and completed the questionnaire were involved in the study. Except the excluded portion. The study sample involved 370 persons, 349 of them provided a valid questionnaire for analysis.

2.5. Data collection tools and instruments

Data were collected using questionnaire at Arabic copy. The questionnaire was categorized into four parts, the first part was about demographic questions, and the second part was Beck Depression Inventory (BDI), while third part was Penn State Worry Questionnaire (PSWQ), in addition to fourth part that was the approval of participate. A study conducted by West found that the statistical analyses of the internal consistency and stability of the Arabic-BDI indicated a high degree of reliability. Also, the correlations between Arabic-BDI scores and Arab clinicians' ratings indicated a high degree of validity.^[12] Wuthrich et al., found that the PSWQ has also shown good internal consistency, and moderate convergent validity with other measures of anxiety.^[13]

2.6. Data Management and Analysis plan

Statistical Package for the Social Sciences (SPSS) version 20 for Windows, was used for data entry and statistical analysis. The statistics were being parametric when values were normally distributed, but chi square was used for categorical values.

2.7. Ethical considerations

Official permissions were obtained from the scientific ethical committee of Taibah university. Informed consent was obtained from all the participants after describing the aim of the study. Privacy and confidentiality were assured as questionnaire was filed anonymously.

3. Population & Sample of the Study

The study population consists of all residents of Medina, a random sample of (370) Person was chose, and the questionnaire distributed to them. (350) valid questionnaires were retrieved for analysis. Table (1) shows their characteristics according to personal data.

Table (1): The participants personal data (n=350).

		Frequency	Percent
Age	15- 19	53	15.1
	20- 24	90	25.7
	25- 29	66	18.9
	30- 34	48	13.7
	35- 39	45	12.9
	40 and more	48	13.7
Gender	Male	72	20.6
	Female	278	79.4
Marital status	Single	174	49.7
	Married	151	43.1

Educational level	Absolute	20	5.7
	Widowed	5	1.4
	Primary	10	2.9
	Preparatory	31	8.9
	Secondary	114	32.6
	Academic	180	50.4
	Other	15	4.3
Total		350	100.0

The next figure concludes all the previous results.

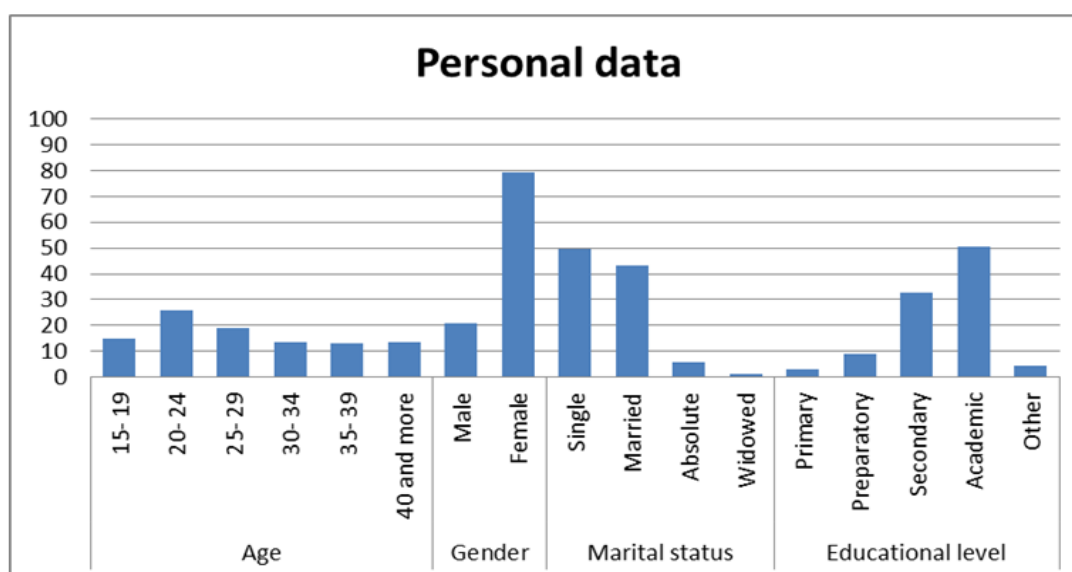


Figure (1): The participants personal data.

4. RESULTS

4.1. Analysis of the results of Beck's Depression Inventory

The Beck Depression Inventory (BDI) is a commonly used instrument for quantifying levels of depression. The scale for the BDI was originally created by patients' descriptions of their symptoms – mood, pessimism, sense of failure, self-dissatisfaction, guilt, suicidal ideas, crying, irritability, social withdrawal, insomnia, fatigue, appetite, weight loss, self-accusation. In the first portion of the test, psychological symptoms are assessed whereas the second portion assesses physical symptoms.

The BDI test includes a 21 item self-report using a four-point scale ranging which ranges from 0 (symptom not present) to 3 (symptom very intense. can be evaluate the depression according to the Table below.

Total Score	Levels of Depression
0 – 9	No depression
10 – 15	Mild depression
16 – 23	Moderate depression
24 and more	Severe depression

Table 2: Distribution of the participants according to the degree of depression.

No	Items	#	%	X ²	Sig.
1	I do not feel sad.	162	47.1	209.093	.000
	I feel sad	143	41.6		
	I am sad all the time and I can't snap out of it.	27	7.8		
	I am so sad and unhappy that I can't stand it.	12	3.5		
2	I am not particularly discouraged about the future.	236	68.8	358.586	.000
	I feel discouraged about the future.	54	15.7		
	I feel I have nothing to look forward to.	35	10.2		
	I feel the future is hopeless and that things cannot improve.	18	5.2		
3	I do not feel like a failure.	268	78.8	533.247	.000
	I feel I have failed more than the average person.	37	10.9		
	As I look back on my life, all I can see is a lot of failures.	32	9.4		
	I feel I am a complete failure as a person.	3	.9		
4	I get as much satisfaction out of things as I used to.	198	57.7	254.563	.000
	I don't enjoy things the way I used to.	106	30.9		
	I don't get real satisfaction out of anything anymore.	15	4.4		
	I am dissatisfied or bored with everything.	24	7.0		
5	I don't feel particularly guilty	65	18.8	354.925	.000
	I feel guilty a good part of the time.	234	67.6		
	I feel quite guilty most of the time.	40	11.6		
	I feel guilty all of the time.	7	2.0		
6	I don't feel I am being punished.	164	48.2	275.694	.000
	I feel I may be punished.	159	46.8		
	I expect to be punished.	11	3.2		
	I feel I am being punished.	6	1.8		
7	I don't feel disappointed in myself.	186	54.1	197.837	.000
	I am disappointed in myself.	85	24.7		
	I am disgusted with myself.	69	20.1		
	I hate myself.	4	1.2		
8	I don't feel I am any worse than anybody else.	179	52.2	200.988	.000
	I am critical of myself for my weaknesses or mistakes.	115	33.5		
	I blame myself all the time for my faults.	34	9.9		
	I blame myself for everything bad that happens.	15	4.4		
9	I don't have any thoughts of killing myself.	297	86.8	706.865	.000
	I have thoughts of killing myself, but I would not carry them out.	38	11.1		
	I would like to kill myself.	3	.9		
	I would kill myself if I had the chance.	4	1.2		
10	I don't cry any more than usual.	198	57.7	219.717	.000
	I cry more now than I used to.	72	21.0		
	I cry all the time now.	12	3.5		
	I used to be able to cry, but now I can't cry even though I want to.	61	17.8		
11	I am no more irritated by things than I ever was.	138	40.4	108.737	.000
	I am slightly more irritated now than usual.	129	37.7		
	I am quite annoyed or irritated a good deal of the time.	42	12.3		
	I feel irritated all the time.	33	9.6		
12	I have not lost interest in other people.	129	37.7	107.263	.000
	I am less interested in other people than I used to be.	133	38.9		
	I have lost most of my interest in other people.	61	17.8		
	I have lost all of my interest in other people.	19	5.6		

13	I make decisions about as well as I ever could.	176	51.2	166.674	.000
	I put off making decisions more than I used to.	99	28.8		
	I have greater difficulty in making decisions more than I used to.	54	15.7		
	I can't make decisions at all anymore.	15	4.4		
14	I don't feel that I look any worse than I used to.	217	63.6	281.252	.000
	I am worried that I am looking old or unattractive.	59	17.3		
	I feel there are permanent changes in my appearance that make me look unattractive	46	13.5		
	I believe that I look ugly.	19	5.6		
15	I can work about as well as before.	162	47.8	171.36	.000
	It takes an extra effort to get started at doing something.	122	36.0		
	I have to push myself very hard to do anything.	45	13.3		
	I can't do any work at all.	10	2.9		
16	I can sleep as well as usual.	162	47.4	187.848	.000
	I don't sleep as well as I used to.	133	38.9		
	I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.	35	10.2		
	I wake up several hours earlier than I used to and cannot get back to sleep.	12	3.5		
17	I don't get more tired than usual.	136	39.9	155.059	.000
	I get tired more easily than I used to.	148	43.4		
	I get tired from doing almost anything.	40	11.7		
	I am too tired to do anything.	17	5.0		
18	My appetite is no worse than usual.	212	62.4	306.047	.000
	My appetite is not as good as it used to be.	96	28.2		
	My appetite is much worse now.	27	7.9		
	I have no appetite at all anymore.	5	1.5		
19	I haven't lost much weight, if any, lately.	220	65.5	305.976	.000
	I have lost more than five pounds.	65	19.3		
	I have lost more than ten pounds.	26	7.7		
	I have lost more than fifteen pounds.	25	7.4		
20	I am no more worried about my health than usual.	202	59.2	258.941	.000
	I am worried about physical problems like aches, pains, upset stomach, or constipation.	97	28.4		
	I am very worried about physical problems and it's hard to think of much else.	26	7.6		
	I am so worried about my physical problems that I cannot think of anything else.	16	4.7		
21	I have not noticed any recent change in my interest in sex.	220	66.9	315.997	.000
	I am less interested in sex than I used to be.	57	17.3		
	I have almost no interest in sex.	31	9.4		
	I have lost interest in sex completely.	21	6.4		
SUM = 4641					
N = 350					
Mean = 13.3					
Std. Deviation = 8.764					
Rel.Weight =21.1%					
Levels of Depression: Mild depression					

Table (3) shows that the average of the total depression of the participants was (13.3) with a standard deviation (8.764) Therefore, the classification of depression among the population of Medina is (mild depression).

4.2. The Penn State Worry Questionnaire (PSWQ)

Table 3: Distribution of the participants according to the degree of worry.

Items		#	%	X ²	Sig.	Mean	Rel.Weight	Std. D	Level of Worry
1. If I do not have enough time to do everything, I do not worry about it.	Not at all typical of me = 1	47	15.5	1.416	.000	3.39	68%	2.63	Somewhat typical of me
	Rarely typical of me = 2	44	14.5						
	Somewhat typical of me = 3	58	19.1						
	Often typical of me = 4	54	17.8						
	Very typical of me = 5	101	33.2						
2. My worries overwhelm me.	Not at all typical of me = 1	103	33.7	43.379	.000	2.63	53%	1.416	Somewhat typical of me
	Rarely typical of me = 2	46	15.0						
	Somewhat typical of me = 3	65	21.2						
	Often typical of me = 4	56	18.3						
	Very typical of me = 5	36	11.8						
3. I do not tend to worry about things.	Not at all typical of me = 1	36	12.1	41.027	.000	3.51	70%	1.376	Often typical of me
	Rarely typical of me = 2	42	14.1						
	Somewhat typical of me = 3	57	19.1						
	Often typical of me = 4	64	21.5						
	Very typical of me = 5	99	33.2						
4. Many situations make me worry.	Not at all typical of me = 1	68	23.6	5.368	.252	2.99	60%	1.439	Somewhat typical of me
	Rarely typical of me = 2	44	15.3						
	Somewhat typical of me = 3	59	20.5						
	Often typical of me = 4	61	21.2						
	Very typical of me = 5	56	19.4						
5. I know I should not worry about things, but I just cannot help it.	Not at all typical of me = 1	89	25.5	26.602	.000	2.91	58%	1.549	Somewhat typical of me
	Rarely typical of me = 2	36	10.3						
	Somewhat typical of me = 3	58	16.6						
	Often typical of me = 4	49	14.0						
	Very typical of me = 5	67	19.2						
6. When I am under pressure I worry a lot.	Not at all typical of me = 1	51	16.7	69.607	.000	3.54	71%	1.472	Often typical of me
	Rarely typical of me = 2	28	9.2						
	Somewhat typical of me = 3	44	14.4						
	Often typical of me = 4	69	22.6						
	Very typical of me = 5	113	37.0						
7. I am always worrying about something.	Not at all typical of me = 1	95	32.5	32.486	.000	2.79	56%	1.558	Somewhat typical of me
	Rarely typical of me = 2	47	16.1						
	Somewhat typical of me = 3	44	15.1						
	Often typical of me = 4	44	15.1						
	Very typical of me = 5	62	21.2						
8. I find it easy to dismiss worrisome thoughts.	Not at all typical of me = 1	66	22.5	19.406	.001	3.13	63%	1.490	Somewhat typical of me
	Rarely typical of me = 2	37	12.6						
	Somewhat typical of me = 3	65	22.2						
	Often typical of me = 4	46	15.7						
	Very typical of me = 5	79	27.0						
9. As soon as I finish one task, I start to worry about everything else I have to do.	Not at all typical of me = 1	123	41.6	88.324	.000	2.49	50%	1.500	Rarely typical of me
	Rarely typical of me = 2	38	12.8						
	Somewhat typical of me = 3	53	17.9						
	Often typical of me = 4	39	13.2						
	Very typical of me = 5	43	14.5						

10. I never worry about anything.	Not at all typical of me = 1	39	13.0	85.733	.000	3.64	73%	1.416	Often typical of me
	Rarely typical of me = 2	30	10.0						
	Somewhat typical of me = 3	59	19.7						
	Often typical of me = 4	51	17.0						
	Very typical of me = 5	121	40.3						
11. When there is nothing more I can do about a concern, I do not worry about it any more.	Not at all typical of me = 1	57	19.2	24.498	.000	3.23	65%	1.470	Somewhat typical of me
	Rarely typical of me = 2	38	12.8						
	Somewhat typical of me = 3	66	22.2						
	Often typical of me = 4	48	16.2						
	Very typical of me = 5	88	29.6						
12. I have been a worrier all my life.	Not at all typical of me = 1	140	47.3	155.588	.000	2.25	45%	1.392	Rarely typical of me
	Rarely typical of me = 2	38	12.8						
	Somewhat typical of me = 3	65	22.0						
	Often typical of me = 4	21	7.1						
	Very typical of me = 5	32	10.8						
13. I notice that I have been worrying about things.	Not at all typical of me = 1	76	25.3	6.933	.139	2.92	58%	1.453	Somewhat typical of me
	Rarely typical of me = 2	48	16.0						
	Somewhat typical of me = 3	60	20.0						
	Often typical of me = 4	60	20.0						
	Very typical of me = 5	56	18.7						
14. Once I start worrying, I cannot stop.	Not at all typical of me = 1	94	31.0	25.036	.000	2.79	56%	1.520	Somewhat typical of me
	Rarely typical of me = 2	47	15.5						
	Somewhat typical of me = 3	55	18.2						
	Often typical of me = 4	47	15.5						
	Very typical of me = 5	60	19.8						
15. I worry all the time.	Not at all typical of me = 1	144	48.6	158.831	.000	2.20	44%	1.400	Rarely typical of me
	Rarely typical of me = 2	43	14.5						
	Somewhat typical of me = 3	52	17.6						
	Often typical of me = 4	26	8.8						
	Very typical of me = 5	31	10.5						
16. I worry about projects until they are all done.	Not at all typical of me = 1	53	17.5	69.093	.000	3.50	70%	1.494	Often typical of me
	Rarely typical of me = 2	22	7.3						
	Somewhat typical of me = 3	52	17.2						
	Often typical of me = 4	64	21.2						
	Very typical of me = 5	111	36.8						
The final result						3.01	60%	.777	Somewhat typical of me

Table (3) illustrate the level of worry among the population of Medina, the results indicate that the general level of worry was medium, with relative weight of 60%. as the tenth phrase "I never worry about anything" received the highest worry, with relative weight of 73%. while the fifteenth phrase "I worry all the time", received the lowest worry with relative weight of 44%.

5. DISCUSSION

The present study aimed to estimate the current incidence of anxiety and depression among Al Madinah population. The study involved 349 subjects of both sexes, and the study was based mainly on Beck Depression Inventory (BDI) and Penn State Worry Questionnaire (PSWQ). Regarding the Validity and reliability of the questionnaires, both of them were validated.

Depression is a mental illnesses, causes persistent low mood and feeling of despair in the depression patients. This illness makes a person feel sad, hopeless, frustrated, lose interest in things one usually enjoyed, and have low self-esteem.^[14] Depression has become a rife disorder around the world, and affecting a significant number of people.^[15] In a country like Saudi Arabia, evolution and prosperity in socioeconomic status can lead to chronic diseases propagation including chronic mental illnesses such as depression.^[16] According to World Health Organization, the prevalence of depression in Saudi Arabia is ranged between 17-46%.^[14] However, the prevalence of depression is underestimated in Saudi population.^[17]

The Beck Depression Inventory (BDI) is one of the most common scales as one of the most widely used self-report instruments for evaluating the severity of depression. The Beck Depression Inventory has been translated into a lot of languages with high levels of reliability and validity across cultures.^[15,12]

Using Beck Depression Inventory (BDI) our study showed that the average of the total depression of the participants was (13.3). Therefore, the classification of depression among the population of Al Madinah is (mild depression). Regarding the prevalence of depression among this population, the study revealed that it was about 21.1%. our finding here confirmed with Abdel-Fattah et al. finding in KSA that Prevalence rates of actual depression are ranged between 15% - 25%, and the mean total score for the BDI was 15.20 ± 11.14 .^[18] while, Joury et al. found at their study in Riyadh city in 2012 that 59% were ranged between moderate and extreme depression.^[17] The high incidence of depression in Joury et al. study may be due to the fact that most participants had abnormal BMI, which would increase the risk of depression. Also, Aljabri et al. found at their study among university students in Al Madinah Al Munawwarah, Saudi Arabia, that the prevalence of depression were ranged between 37% _60%.^[19] The reason for this high rate of depression among university students is that university students are exposed to a lot of psychological stress, which in turn increases their rate of depression.

It should be noted that depression has many underlying risk factors such as; stress, chronic medical illness, chronic pain, female gender, younger age, family history, job loss, low income, substance abuse, lack of social support, low self-esteem, being single, past history, widowed or divorced, and traumatic brain injury.^[14]

Worry is characterized by uncontrollable thoughts, images, and fear and concentrate on negative outcomes. Worry is an important emotion in the spectrum of fear and anxiety, so some considered it to exist in diverse anxiety disorders, such as social anxiety, compulsive disorder (OCD), and panic disorder.^[20]

The Penn State Worry Questionnaire (PSWQ) is a measure used widely to measure the worry severity. The full PSWQ has shown robust psychometric properties in non-clinical young adult samples, clinical young adult samples, and student samples. Also, in older adult samples, the PSWQ has shown good internal consistency ($\alpha = .83$) and moderate convergent validity with other measures of anxiety.^[13]

The level of anxiety was measured in this study using Penn State Worry Questionnaire (PSWQ), the results showed that the general level of worry was medium, and the prevalence rates for symptoms of anxiety 60%. As we note, the prevalence of anxiety in our study is higher than the prevalence of depression, and these results are consistent with what Tovilla-Zarate mentioned that, it has been frequently observed in the literature that anxiety has more prevalence than depression.^[21]

The level of anxiety was measured in this study using Penn State Worry Questionnaire (PSWQ), the results showed that the general level of worry was medium, and the prevalence rates for symptoms of anxiety 60%. As we note, the prevalence of anxiety in our study is higher than the prevalence of depression, and these results are consistent with what Tovilla-Zarate mentioned that, it has been frequently observed in the literature, that anxiety has more prevalence than depression.^[21] Another study was carried out by Al-Johani et al. to measure the prevalence and risk factors of anxiety among male high school students in Al-Madinah city, and their results regarding the prevalence of anxiety was close to our results.^[22] While Al-Qahtani et al. found higher results among Female secondary school students, whereas 64.6% of students showed symptoms of anxiety.^[23] This is consistent with the results of several studies reported by McLean et al., indicate that the most of anxiety disorders are usually higher in females.^[24] Aljabrit al. found also higher percentage of anxiety among

Taibah university students in Al-Madinah city ranged between 70% - 83%.^[19] These high rates of anxiety among university students are expected due to their stress and academic burden during the years of study at the university.

The limitations of this study is that it did not included the entire city of Al-Madinah Al-Munawwarah, but it was conducted in a limited area in Al Rashid mall, Al-Madinah Al-Munawwarah, Kingdom of Saudi Arabia.

The following are some recommendations to minimize the problem of depression and anxiety in society; (1) Further studies about depression and anxiety include wider areas and larger numbers, in order to understand the problem and its causes more deeply. (2) Trying to reduce the pressure on college students and giving them space to entertain. (3) Educating parents about the psychological problems that their children may face and their symptoms, especially depression and anxiety. (4) Educating parents and the community about how to deal with a depressed or anxiety person, and how to alleviate it. (5) Attention to the feelings of people who go through bad conditions such as illness or divorce because it would increase the incidence of anxiety and depression among these people. (6) Attempting to implement recreational activities in schools and universities to reduce the burden of study and pressure on students. (7) Practice relaxation and meditation exercises to relieve anxiety and depression.

6. CONCLUSION

This study showed that the evaluation of depression severity among Al Madinah population is mild depression. The prevalence of depression Al Madinah population was about 21.1%. As well as, this study showed that the general level of anxiety among Al Madinah population is medium, with prevalence rates for symptoms of anxiety 60%. Finally we would like to point out that, as the design used is cross-sectional, the result will describe only the current situation.

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