

Original Article:

Prevalence of Depression among Employees of Lorestan University of Medical Sciences and Its Relationship with Demographic Variables in 2017, west of Iran

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Abstract

Introduction: Depression is one of the psychiatric disorders and is the most common mood disorder. Stably and sometimes unstable, depression can involve and interfere with different aspects of life. By disrupting tasks, reducing motivation, causing anxiety, fear, and concern, depression impairs a significant part of the intellectual ability. Complications of depression have been proven on presence and absenteeism, accuracy in performing duties and efficiency. This study tends to determine the prevalence of depression among employees of Lorestan University of Medical Sciences and its relationship with demographic variables in 2017. **Method:** This cross-sectional study was conducted on employees of the Lorestan University of Medical Sciences in 2017. The subjects were 270 people who filled in adult BDI-II (including 21 3-point questions). The inventory is scored from 0 to 63 (0-13 minimal depression (normal)), 14-19 mild depression, 20-28 moderate depression, and 28-63 severe depression). Data were analyzed using SPSS version 23. **Results:** The mean depression score was 10.7; 48.1% had depression. Prevalence of depression was 12.6% mild depression, 11.1% moderate depression and 6.3% severe depression; 89 (33%) were single and 181 (67%) were married; Prevalence of depression was 29.47% in women and 30.28% in men. **Discussion:** Men were more likely to develop depression than women (27%), which is contrary to many reports. This study showed a significant relationship between age and prevalence of depression. There was a significant relationship between prevalence of depression and marital status; there was a significant relationship between workplace and the kind of work done by people and depression. There was a significant relationship between parental education and depression. There was no significant relationship between education and depression. However, some studies did not report this significant relationship.

Keyword: depression, Employees, Psychiatric

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Introduction:

According to the World Health Organization (WHO) definition, depression is one of the most important mood disorders which is associated with decreased mood, loss of interest, sleep disturbance or appetite loss, reduced energy and poor concentration. Depression is an occasionally stable and sometimes unstable mood which can involve

and interfere with different aspects of life. Change in mood means severe to mild sorrow, sadness, and irritability which affects people. Depression is a widespread traumatic disease which can affect any person of any race or any population.¹ Depression is a psychiatric disorder and is one of the most common mood disorders which affects 12% of men and 25% of women over a lifetime.² Research

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shows that about 19 million Americans experience depression annually.¹ Mental problems lead to impairment in doing duties, reduced motivation, anxiety, fear, and concern, and cause people to devote a significant part of their mental work to these problems; thus it is clear that they will not have sufficient ability and interest to work in the organization. Depression is the cause of many physical distresses, including fatigue, insomnia, decreased sexual desire, diarrhea, constipation, throbbing, tenderness, and numbness. Depression in the workplace has many effects; depressed employees lose more production time than non-depressed people.³⁻⁵ Several studies have shown that depression is a common and costly disorder which affects work and job performance.^{4,6-9}; depressed employees are less likely to report workplace safety and more likely to cause job injuries. These people play a significant role in poisoning the workplace atmosphere and creating tension in interpersonal relationships and the process of doing things.^{10,11}. Epidemiologic studies show that depression is one of the most costly diseases in the workplace. Patients suffering from this disorder are facing more than healthy people with deficiency and inability to perform tasks, which account for 30% of reduced productivity and absenteeism and 70% of mistakes and inability to do things because of the symptoms or complications of treatments.^{11,12} Complications of depression have been proven on presence and absenteeism, accuracy in performing duties and efficiency.⁶ Dehghanet al. reported more than 40% prevalence of depression among employees in the Lorestan Health Care Network.¹³ Fallah et al. reported 40% prevalence of depression among employees of Zanjan University of Medical Sciences.¹⁴ The prevalence of depression among employees of the Sarab Health Care Network was reported at 41.4% (25% in men and 75% in women).¹⁵ As a result, it is necessary to examine the status of depression among employees of each system. Considering the importance of maintaining employee strength and health, first, as human being, and second, as people who are directly involved in maintaining health and well-being of other members of the society, it is necessary to take steps to maintain and improve mental health of employees based on the results obtained from examining the status of depression in employees of the University of Medical Sciences.¹⁶ Therefore, a study was conducted to determine the prevalence of depression among

employees of the Lorestan University of Medical Sciences and its relationship with demographic variables in 2017.

Methods and Materials:

This cross-sectional (descriptive-analytic) study was conducted in Lorestan University of Medical Sciences in 2017. The studied population included employees of the Lorestan University of Medical Sciences. Inclusion criteria included more than one year of work experience, willingness to participate in the study and lack of state mental diseases. Moreover, people taking drugs which have an effect on psyche, chronic and incurable physical diseases and severe familial conflicts were excluded from the study.

In this study, a random classification was used for sampling. Each associate was considered as a class; proportional to personnel size in each class, samples were randomly selected. To select the research sample, subgroups should be present in the sample with the same proportion they exist in the population (university) as representative of that population. In this method, the percentage of subjects randomly selected from each group is equal to the percentage of the same group in the considered population.

Based on Fallah et al.¹⁴, the sample size was set at 270 assuming 40% prevalence of depression using

$$N = \frac{(z_{1-\alpha/2})^2 (PQ)}{d^2}$$

In this study, adult Beck depression inventory (BDI-II) was used to measure the level of depression by using 21 questions. Each question had 3 points from 0 to 3; a total score of the inventory varied from 0 to 63. Evaluation of depression was based on the total score (0-13: minimal depression (normal); 14-19: mild depression; 20-28: moderate depression; 28-63: severe depression). This inventory is an international standard scale devised by the American psychologist Dr. Beck in 1960. Reliability and validity of this inventory have been confirmed worldwide. Reliability of BDI was reported at 78% by Kuder-Richardson method and 75% by re-test method. In Iran, Pourshahbaz also estimated the correlation coefficient of this inventory at 23-68% and its internal consistency at 85%.

Demographic characteristics of the subjects including age, gender, marital status, education, parental education, and birth rate of the subjects were added by demographic questionnaire to the original inventory. The questionnaires were distributed anonymously; objectives of the study

were explained to people and all subjects were ensured of confidentiality of their information. It is noteworthy that a score equal to or greater than 10 in BDI-II was considered as having depression. The collected data was analysed using descriptive statistics (mean, standard deviation, absolute and relative frequency) and inferential statistics (logistic regression test). For data analysis, SPSS software version 23 was used (p-value<0.05).

Results:

Out of 270 subjects, 175 (64.8%) were male. The age of the subjects varied from 24 to 61 years (41.59 ± 7.88); 61 (22.6%) were younger than 35 years, 108 (40%) were 35-45 years old, and 101 (37.4%) were older than 45 years. The mean depression score was 10.7. According to the cut-off score of 10, 48.1% had depression. According to BDI, 30% of people experienced some degrees of depression. Prevalence of depression was 12.6% mild depression, 11.1% moderate depression and 6.3% severe depression; 89 (33%) were single and 181 (67%) were married. An education level of 55.2% of the fathers was under high school diploma and 72.2% of the mothers were under high school diploma. Prevalence of depression was 29.47%in women and 30.28%in men.

To select variables for the multivariate logistic

regression model, all variables were evaluated using univariate logistic regression and variables with a p-value<0.3 were incorporated into the model. For data analysis, confidence intervals, as well as odds ratios obtained from analysis of the results, were used to interpret the effect of risk factors on depression/no depression. The collected data was analyzed using SPSS 24 software (p-value<0.05).

According to univariate logistic regression analysis, there was a significant relationship between gender (OR = 1.276), marital status (OR = 0.757), paternal education, maternal education, department, work experience, age, and depression. That is, men were 27% more likely to have depression than women. Married people were 76% less likely to have depression than single people. Multivariate regression analysis showed that those who worked in Department of Development were 3 times more likely to develop depression than those who worked in Development of Education. Those who worked in other departments were less likely to develop depression than those who worked in Development of Education and this was statistically significant. Using the table below (Table 1), frequency and prevalence of depression can be reported in subgroups of variables.

Table1: Number and percentage of patients grouped based on their depression severity

		Classification of depression								Total N
		Minimal depression		Mild depression		Moderate depression		Severe depression		
		n	%	n	%	n	%	n	%	
Gender	Female	67	70.5	13	13.6	7	7.37	8	8.42	95
	Male	122	69.7	21	12.0	23	13.1	9	5.14	175
Age	<35	45	73.7	5	8.20	6	9.84	5	8.20	61
	35-45	80	74.0	11	10.1	12	11.1	5	4.63	108
	>45	64	63.3	18	17.8	12	11.9	7	6.93	101
Experience (year)	<10	95	73.6	11	8.5	14	10.8	9	6.98	129
	10-20	69	62.7	21	19.0	12	10.9	8	7.27	110
	>20	24	80.0	2	6.67	4	13.3	0	0.00	30
Marital status	Single	63	70.7	10	12.3	7	7.87	9	8.99	89
	Married	126	69.6	24	13.2	23	12.7	8	4.41	181
Education	Associate	8	66.6	3	25.0	1	8.33	0	0.00	12
	BA	166	69.7	31	13.0	25	10.5	16	6.72	238
	MA and higher	15	75.0	0	0	4	20.0	1	5.0	20
Paternal education	Under diploma	99	66.4	21	14.1	16	10.7	13	8.72	149
	Diploma	52	76.4	6	8.82	8	11.7	2	2.94	68
	Associates	9	64.2	2	14.3	3	21.4	0	0	14
	BA	25	78.1	3	9.38	2	6.25	2	6.25	32
	MA and higher	4	57.1	2	28.6	1	14.3	0	0.00	7
Maternal education	Under diploma	135	69.23	25	12.8	18	9.23	17	8.72	195
	Diploma	42	72.41	6	10.3	10	17.2	0	0	58
	Associates	1	33.33	1	33.33	1	33.3	0	0	3
	BA	10	83.33	1	8.33	1	8.33	0	0	12
None	MA and higher	1	50.00	1	50.00	0	0	0	0	2
	No	41	66.13	10	16.13	8	12.9	3	4.84	62
	Yes	148	71.15	24	11.54	22	10.6	14	6.73	208
Department	Education	44	65.67	9	13.43	10	14.93	4	5.97	67
	Research	33	73.33	5	11.11	6	13.33	1	2.22	45
	Culture	36	70.59	4	7.84	7	13.73	4	7.84	51
	Treatment	22	61.11	7	19.44	3	8.33	4	11.11	36
	Health	26	83.87	3	9.68	1	3.23	1	3.23	31
	Development	10	47.62	5	23.81	3	14.29	3	14.29	21
	Food and drug	18	94.7	1	5.3	0	0	0	0.00	19
	Total	189	70.0	34	12.6	30	11.1	17	6.30	270

Discussion:

In the present study, the prevalence of depression was 30% among the studied people. The risk of depression in men was 27% higher than that of women, contrary to many reports^{13,17-19}, which can be due to the low number of female participants compared to men and economic pressures considering payments in Iran for providing the family. However, some studies have claimed that there is no significant relationship between gender and prevalence of depression.^{1,14,20}

This study, contrary to Nabipouret al, Dehghanet al, Fallahet al., found a significant relationship between age and prevalence of depression.^{13,14,18}

There was a significant relationship between prevalence of depression and marital status, which is consistent with some studies.²¹ This can be attributed to mental relaxation.

Prevalence of depression was lower in married people than single people; the risk of depression in married people was 76% less than that of singles, which is contrary to Pouretamad et al.²² However, several studies have shown that there is no significant relationship between prevalence of depression and marital status.^{14,23}

Prevalence of depression was about 52% in the Department of Development and about 34% in the Department of Education. Thus, the risk of depression in those who worked in the Department of Development was 3 times higher than those who worked in the Department of Education. Those who worked in other departments were less likely to develop depression than those who worked in Development of Education and this was statistically significant. Workplace and the type of work that people do have been studied in several studies, which is consistent with the results of this study; there is a significant relationship between workplace and depression.¹⁴ Even this difference is seen in cities of service, as suggested by Janice et al.²⁴

There was a significant relationship between parental education and depression; this is consistent with Yousefi et al, Rostamzadeh and Khalilzadeh, who claim that depression symptoms also become clearer by increasing parental education.

However, in this study, it cannot be claimed that this relationship is direct or inverted; this may be due to the low number of samples at some levels of education. The lowest depression was observed in those whose parents had a bachelor's degree. The highest severe depression was observed in people whose parents had less than high school diploma. Sheikh Ahmadi et al. reported no significant relationship between depression and parental education.²⁵

The relationship between education and depression was inconsistent with other studies; in this study, this relationship was insignificant.^{14,18,26} However, some studies did not report this significant relationship.^{6,23}

Inconsistent with Fallah, there was a significant relationship between work experience and depression. The highest prevalence of depression was observed in employees with 10-20 years of experience. In other studies, this relationship was also significant; however, depression was higher in people with more than 20 years of experience, which can be due to the low number of people with 20 years of experience.^{14,18,23}

There was no significant relationship between place of birth (native or non-native) and depression.

Limitations and Problems:

Limitations and problems of this study include the lack of cooperation of employees in filling in the questionnaire, the lack of willingness to participate in the study, incomplete filling of the questionnaire, use of drugs for depression and those who were in grief.

Ethical Approval:

This research proposal was accepted by the Ethics Committee of LUMS, Iran

Conflict of interest: None declared

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Author's Contributions:

Data gathering and idea owner of this study: BK

Study design: MY

Data gathering: SDD

Data analysis and consultation: NA

Writing and submitting manuscript: MM

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