

Original Article

Assessing the Effective factors on depression in Khuzestan women

Mojtaba Sepandi^{1,2}, Maryam Taghdir^{1,2}, Isa Akbarzadeh³, Farzad Khodamoradi³, Yousef Alimohamadi^{3*}¹Health Research Center, Life Style Institute, Baqiyatallah University of Medical Sciences, Tehran, Iran²Department of Epidemiology and Biostatistics, Faculty of Health, Baqiyatallah University of Medical Sciences, Tehran, Iran.³Department of Epidemiology and Biostatistics, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran.

ARTICLE INFO

ABSTRACT

Received 25.04.2018
 Revised 10.10.2018
 Accepted 05.11.2018
 Published 20.12.2018

Key words:

depression,
 women,
 Khuzestan

Introduction: depression is one of the main problems and disrupting daily life activities in women. Due to the important role of women in society and the effect of depression on this group activity the aims of the current study was to investigate of the identification effective factors on women's depression in Khuzestan province.

Method: In this cross-sectional study, 899 women who referred to health centers in Ahwaz were selected by cluster sampling method. For analysis purpose, multivariate and univariate linear regression was used. All analysis performed by SPSS version 19 with regarding α : 0.05 for the significant level.

Results: in case of effective factors on depression score, number of Education Years, Competence score, Relatedness score, Autonomy score, Presence of Meaning in Life score, Search for Meaning in Life score had the significant effect on depression score ($p < 0.001$).

Conclusion: Education level, marital status, education level, Social Competence, relatedness, Autonomy; Presence of meaning in life, Search for meaning in life and Depression are effective factors on depression so focusing on this factors can have the very important role in prevention programs.

Introduction

Depression is a mood disorder in which a person feels sad, unpleasant and discouraged, and cannot feel joy. Regardless of race, class, and social status, depression can occur in any person (1). Depression is a disease that affects the family, lifestyle, productivity in work, sleeping, eating habits and public health (2). One of the consequences of depression is suicide, which is often due to lack of treatment (2). The depression in the world has affected 121 million people (2, 3). The incidence of depression and its symptoms in the world is 8 to 38 percent (4). In 2020, it is also predicted to be second among disabling factors in the world (5). In Iran, the prevalence of general

depression in the population is between 4.2% and 37% (3). Compared with other chronic diseases, untreated depression has the greatest negative impact on the health of the world's people. These findings are more relevant to women because depression in women is more common in comparison with men (6). In studies lifetime rates of depression in women, 9.5% have been reported. According to studies Age under 55, divorced women with four or more children, higher exposure to recent adverse life events and low socio-economic are the strong predictor for depression in women (7). Cyclic fluctuation of female hormones increases the physical stress-response that may increase vulnerability to depression (7). Cohort studies have shown that dietary patterns such as fruits

* Corresponding author: (Email: y.alimohamadi67@gmail.com)

and vegetables, olive oil and legumes may prevent depression (8). According to the importance of depression in disrupting daily life activities and the important role of women in society and so far a study in Khuzestan province has not focused on depression in women, this study aims to investigate the factors affecting women's depression in Khuzestan province.

Methods:

Variables and data collection tools

In this cross-sectional study, 899 women who referred to health centers in Ahwaz were selected by cluster sampling method. The total number of clusters was 25 clusters, after selection clusters, understudy cases were selected using simple random sampling from all clusters. In this study, variables included age, occupation status, years of education, marital status, education level, ethnicity, Nutritional Factors (the Frequency consumption of Meat, Tea, Fast Food, sugar, and sweet), BMI, and Time spent for watching TV and physical activity Social Competence score, relatedness score, Autonomy score; Presence of meaning in life score, Search for meaning in life score and Depression score was studied. Beck depression short inventory and Meaning in life Questionnaire and a checklist that designed with researcher were used for data collection.

Data analysis

In this study, the general score of depression as the main dependent variable was introduced into the model so that in the first stage a hypothetical model was developed based on previous studies for depression and then the

hypothesized model was analyzed using multiple regression tests. The variables that were not significant in the multiple regression models were removed and finally, the final model of effective factors on depression was developed. For analysis purpose, multivariate and univariate linear regression was used. All analysis performed by SPSS version 19 with regarding α : 0.05 for the significant level.

Results:

In this analytic cross-sectional study 899 women entered to study. The mean age of participants was 30.6 ± 10.1 . Overall 83% of cases were married, most cases (30.6%) was diploma, 58.8% of cases were Arabic speaker people and 79.6% of the total of women was the housewife (table 1). The average of Psychological variable among under study women were shown in table 2. In case of effective factors on depression score, number of Education Years, Competence score, Relatedness score, Autonomy score, Presence of Meaning in Life score, Search for Meaning in Life score had a significant effect on depression score ($p < 0.001$). But there was an inverse association between these variables and depression score due to the negative sign of standardized Beta. It means with the increase in the amount of these variables the depression score Decrease. Other variables such as age, Nutritional Factors (the Frequency consumption of Meat, Tea, Fast Food, sugar, and sweet), BMI, and Time spent for watching TV and physical activity doesn't have the significant effect on depression score. So non-significant factors were excluded from the analysis.

Table 1. Descriptive characteristics among under study women

variables	n	Percent (%)
Marital status		
Married	746	83%
Widow	18	2%
Divorced	2	0.2%
Single	133	14.8%
Education		
Uneducated	71	7.9%
Elementary	186	20.7%
Guidance school	224	24.9%
Diploma	275	30.6%
Academic	143	15.9%
Ethnicity		
Fars	248	27.6%
Lor	89	9.9%
Arabic Speaker	1539	58.8%
Other	27	3%
Job		
housewife	716	79.6%
Employee	91	10.1%
Student	60	6.7%
Free	25	2.8%
Total	899	100%

Table 2: Mean and standard deviation of age , education years and Psychological variables among under study women.

Variables	Mean \pm SD
Age	30.6 \pm 10.1
Education years	8.5 \pm 4.9
Competence score	30.4 \pm 4.3
Relatedness score	41.5 \pm 5.1
Autonomy score	33.7 \pm 6.3
Presence of meaning in life score	27.5 \pm 4.5
Search for meaning in life score	28.9 \pm 4.7
Depression score	10.3 \pm 6.7

Table 3: Effective factors on depression score.

Variables	Standardized Coefficients(Beta)	p
Education Years	-.210	<0.001
Competence score	-.182	<0.001
Relatedness score	-.102	<0.001
Autonomy score	-.156	<0.001
Presence of Meaning in Life score	-.231	<0.001
Search for Meaning in Life score	-.063	0.04

Discussion:

In this study, we assessed effective factors on depression in Khuzestan women. Our data showed factors including number of educational years, competence, relatedness, autonomy, the presence of meaning in life and searching for meaning in life had effects on depression.

We observed the relationship between the number of years educated and depression, in a way that by increasing years of education, depression relatively decreased. This finding is similar to findings of recent studies (9-17). After searching the literature about depression and educational status we found no relationships in some surveys (18). This could be due to the variation in a population group which is rural areas and this could be a notable finding to compare the effect of this variable on depression in urban and rural populations. Ethnicity and marital status were two independent variables which affected educational status. According to these findings, it can be concluded that by increasing the development and raising the level of education in society, depression can be controlled in some parts of society. Another effective factor was competence score which also by increasing this score, depression decreased. In previous surveys about the role of competence in depression, this relationship was highly supported (19-27). In a study, there were differences observed in two groups of boys and girls in the effect of competence on depression (28). This should further investigated to find out what is exactly the cause of this difference. Competence also effects on relatedness and searching for meaning in life which is both affecting on depression. Autonomy and presence of meaning in life as two other affecting factors on depression had an effect on competence. According to this finding, one can conclude that by improving the competence of society and individuals, it can be countered with depression and according to the results of other articles with anxiety and stress. Relatedness and autonomy were also two other

factors affecting depression. Women with the higher score in these two variables had lower scores in depression. This finding also is supported in studies of other authors (29-36). Autonomy had the effect on competence and presence of meaning in life as well as depression. Relatedness only had the effect on depression but was influenced by competence and searching for meaning in life. This finding highlights the importance of paying enough attention to women's dependency and also the sense of relatedness. In classic families in the cities of Iran, in most of the cases, there is nearly non-autonomy for women and girls. This could lead females into depression and other mental problems. Presence of meaning in life also was one of the important factors which had an influence on depression. The finding gained in this paper is highly supported with recent literature and in different situations such as recovery (37-45). Search for meaning in life was also another similar factor which was demonstrated affecting on depression in this study; and also was corresponded with previous studies (44, 46, 47). However, these findings seemed contradictory to findings from previous studies (48) that counted social support as an important factor in depression and not meaning in life. These findings indicated the importance of discovering the meaning to control depression and other similar psychological disorders in adults and especially in the female part of the population.

Conclusion

Education level, marital status, education level, Social Competence, relatedness, Autonomy; Presence of meaning in life and Search for meaning in life and are effective factors on depression, so managing of these factors if it is applicable may reduce depression among women.

Conflict of interest:

There is no conflict of interest.

Acknowledgments

We would like to thank all those researchers who helped us with this study.

1. Smith LL, CH. E. Demystifying and defeating depression 2003. p. 9-20 p.
2. Nazemi L, Skoog I, Karlsson I, Hosseini S, Hosseini M, Hosseinzadeh MJ, et al. Depression, prevalence and some risk factors in elderly nursing homes in Tehran, Iran. *Iranian journal of public health.* 2013;42(6):559.
3. MOHAMMAD BA, MOHAMMAD SN, Ghamari F, SALEHI B. Depression symptoms prevalence, general health status and its risk factors in dormitory students of Arak universities in 2008. 2009.
4. Aktas S, Calik KY. Factors affecting depression during pregnancy and the correlation between social support and pregnancy depression. *Iranian Red Crescent Medical Journal.* 2015;17(9).
5. Murray CJ, Lopez AD. Alternative projections of mortality and disability by cause 1990–2020: Global Burden of Disease Study. *The Lancet.* 1997;349(9064):1498-504.
6. Flynn HA, Spino C, Guille C, Deligiannidis KM, Maki P, Jahnke J, et al. A Collaborative, Network-Based Approach to Advance Women's Depression Research in the United States: Preliminary Findings. *Journal of Women's Health.* 2018;27(1):51-7.
7. Al-Sharbaty Z. Re: Silent Epidemic of Depression in Women in the Middle East and North Africa Region. *Sultan Qaboos University Medical Journal.* 2009;9(3):359.
8. Shivappa N, Schoenaker DA, Hebert JR, Mishra GD. Association between the inflammatory potential of diet and risk of depression in middle-aged women: the Australian Longitudinal Study on Women's Health. *British Journal of Nutrition.* 2016;116(6):1077-86.
9. De Oliveira G, Cianelli R, Gattamorta K, Kowalski N, Peragallo N. Social Determinants of Depression Among Hispanic Women. *Journal of the American Psychiatric Nurses Association.* 2017;23(1):28-36.

References

10. Dudal P, Bracke P. Absolute and relative educational inequalities in depression in Europe. *International journal of public health.* 2016;61(7):787-95.
11. Freeman A, Tyrovolas S, Koyanagi A, Chatterji S, Leonardi M, Ayuso-Mateos JL, et al. The role of socio-economic status in depression: results from the COURAGE (aging survey in Europe). *BMC Public Health.* 2016;16(1):1098.
12. Giri M, Chen T, Yu W, Lü Y. Prevalence and correlates of cognitive impairment and depression among elderly people in the world's fastest growing city, Chongqing, People's Republic of China. *Clinical interventions in aging.* 2016;11:1091.
13. Kanmogne GD, Qiu F, Ntone FE, Fonsah JY, Njamnshi DM, Kuate CT, et al. Depressive symptoms in HIV-infected and seronegative control subjects in Cameroon: Effect of age, education, and gender. *PloS one.* 2017;12(2):e0171956.
14. Munhoz TN, Nunes BP, Wehrmeister FC, Santos IS, Matijasevich A. A nationwide population-based study of depression in Brazil. *Journal of affective disorders.* 2016;192:226-33.
15. Patra P, Alikari V, Fradelos EC, Sachlas A, Kourakos M, Gil APR, et al. Assessment of depression in the elderly. Is perceived social support related? A nursing home study. *GeNeDis* 2016: Springer; 2017. p. 139-50.
16. Turgunova L, Laryushina Y, Turmukhambetova A, Koichubekov B, Sorokina M, Korshukov I. The Incidence of Depression among the Population of Central Kazakhstan and Its Relationship with Sociodemographic Characteristics. *Behavioral neurology.* 2017;2017.
17. Di Florio A, Putnam K, Altemus M, Apter G, Bergink V, Bilszta J, et al. The impact of education, country, race and ethnicity on the self-report of postpartum depression using the

- Edinburgh Postnatal Depression Scale. *Psychological medicine*. 2017;47(5):787-99.
18. Lojko D, Czajkowska A, Suwalska A, Palys W, Jaracz K, Górna K, et al. Symptoms of depression among adults in rural areas of western Poland. *Annals of Agricultural and Environmental Medicine*. 2015;22(1).
19. Childs H, Schneider H, Dula C. Adolescent adjustment: Maternal depression and social competence. *International Journal of Adolescence and Youth*. 2001;9(2-3):175-84.
20. Epkins CC, Seegan PL. Mother-reported and children's perceived social and academic competence in clinic-referred youth: Unique relations to depression and/or social anxiety and the role of self-perceptions. *Child Psychiatry & Human Development*. 2015;46(5):656-70.
21. Gable SL, Shean GD. Perceived social competence and depression. *Journal of Social and Personal Relationships*. 2000;17(1):139-50.
22. Ostrander R, Crystal DS, August G. Attention deficit-hyperactivity disorder, depression, and self-and other-assessments of social competence: a developmental study. *Journal of Abnormal Child Psychology*. 2006;34(6):772-86.
23. Smari J, PORSTEINSDÓTTIR V. Social anxiety and depression in adolescents in relation to perceived competence and situational appraisal. *Journal of Adolescence*. 2001;24(2):199-207.
24. Uhrlaas DJ, Schofield CA, Coles ME, Gibb BE. Self-perceived competence and prospective changes in symptoms of depression and social anxiety. *Journal of Behavior Therapy and Experimental Psychiatry*. 2009;40(2):329-37.
25. Velimirović I, Vranko M, Ferić M, Brečić P, editors. Social competence and depression at the time of the Great refugee crisis: European context. Differences in social competence self-assessment of patients diagnosed with depression due to the form of treatment. 7th EUSPR Conference and Members' Meeting: Sustainable prevention in a changing world; 2016.
26. Wang Y, Dix T. Mothers' early depressive symptoms predict children's low social competence in first grade: Mediation by children's social cognition. *Journal of Child Psychology and Psychiatry*. 2015;56(2):183-92.
27. Williams KL, Galliher RV. Predicting depression and self-esteem from social connectedness, support, and competence. *Journal of Social and Clinical Psychology*. 2006;25(8):855-74.
28. Moon SH, Cho HH. Gender differences in self-competence, social anxiety and depression in upper level primary school children. *Journal of Korean Academy of Child Health Nursing*. 2010;16(3):230-8.
29. Balkir N, Arens EA, Barnow S. Exploring the relevance of autonomy and relatedness for mental health in healthy and depressed women from two different cultures: When does culture matter? *International Journal of Social Psychiatry*. 2013;59(5):482-92.
30. Dinger U, Barrett MS, Zimmermann J, Schauenburg H, Wright AG, Renner F, et al. Interpersonal problems, dependency, and self-criticism in major depressive disorder. *Journal of clinical psychology*. 2015;71(1):93-104.
31. Gauthier L, Guay F, Sénécal C, Pierce T. Women's depressive symptoms during the transition to motherhood: The role of competence, relatedness, and autonomy. *Journal of Health Psychology*. 2010;15(8):1145-56.
32. Kopala-Sibley DC, Zuroff DC, Hankin BL, Abela JR. The development of self-criticism and dependency in early adolescence and their role in the development of depressive and anxiety symptoms. *Personality and Social Psychology Bulletin*. 2015;41(8):1094-109.
33. Ryan S, McGuire B. Psychological predictors of pain severity, pain interference, depression, and anxiety in rheumatoid arthritis patients with chronic pain. *British journal of health psychology*. 2016;21(2):336-50.
34. Seo S, Jeon J, Chong Y, An J. The relations among relatedness needs, subjective

- well-being, and depression of Korean elderly. *Journal of women & aging*. 2015;27(1):17-34.
35. Souesme G, Martinent G, Ferrand C. Perceived autonomy support, psychological needs satisfaction, depressive symptoms and apathy in French hospitalized older people. *Archives of gerontology and geriatrics*. 2016;65:70-8.
36. Bekker MH, Belt U. The role of autonomy-connectedness in depression and anxiety. *Depression and anxiety*. 2006;23(5):274-80.
37. Bamonti P, Lombardi S, Duberstein PR, King DA, Van Orden KA. Spirituality attenuates the association between depression symptom severity and meaning in life. *Aging & mental health*. 2016;20(5):494-9.
38. Blackburn L, Owens GP. The effect of self efficacy and meaning in life on posttraumatic stress disorder and depression severity among veterans. *J Clin Psychol*. 2015;71(3):219-28.
39. Chow EO. The role of meaning in life: mediating the effects of perceived knowledge of stroke on depression and life satisfaction among stroke survivors. *Clinical rehabilitation*. 2017;31(12):1664-73.
40. Du H, Li X, Chi P, Zhao J, Zhao G. Meaning in life, resilience, and psychological well-being among children affected by parental HIV. *AIDS care*. 2017;29(11):1410-6.
41. Krause N. Evaluating the stress-buffering function of meaning in life among older people. *Journal of aging and health*. 2007;19(5):792-812.
42. Munoz M, Santos-Olmo AB, Sehner S, Weber K, Wegscheider K, Wittchen HU, et al. *Aging & mental health*.
43. Owens GP, Steger MF, Whitesell AA, Herrera CJ. Posttraumatic stress disorder, guilt, depression, and meaning in life among military veterans. *Journal of traumatic stress*. 2009;22(6):654-7.
44. Steger MF, Mann JR, Michels P, Cooper TC. Meaning in life, anxiety, depression, and general health among smoking cessation patients. *Journal of psychosomatic research*. 2009;67(4):353-8.
45. Volkert J, Harter M, Dehoust MC, Ausin B, Canuto A, Da Ronch C, et al. The role of meaning in life in community-dwelling older adults with depression and relationship to other risk factors. 2017:1-7.
46. Dezutter J, Luyckx K, Wachholtz A. Meaning in life in chronic pain patients over time: associations with pain experience and psychological well-being. *Journal of behavioral medicine*. 2015;38(2):384-96.
47. Van der Heyden K, Dezutter J, Beyers W. Meaning in Life and depressive symptoms: a person-oriented approach in residential and community-dwelling older adults. *Aging & mental health*. 2015;19(12):1063-70.
48. Hadidi N, Treat-Jacobson DJ, Lindquist R. Poststroke depression and functional outcome: a critical review of the literature. *Heart & lung : the journal of critical care*. 2009;38(2):151-62.