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PREVALENCE OF DEPRESSION SYMPTOMS AND ASSOCIATED SOCIO-DEMOGRAPHIC FACTORS IN PRIMARY HEALTH CARE PATIENTS

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SUMMARY

Background: *Depression is a growing public health problem still under-recognised in primary care settings. By focusing primarily on somatic complaints and diseases, general practitioners often fail to identify an underlying mental disorder. The aim of this study was to assess the prevalence of patients with unrecognised depression symptoms in general practice and identify associated socio-demographic factors.*

Subjects and methods: *The study included 769 patients without previous psychiatric disorder who attended their primary care physicians in the Health Centre Zagreb - Zapad in January 2011. Data on patients' age, sex, level of education, marital and employment status were collected. All participants completed The Zung Self-Rating Depression Scale.*

Results: *Among the 25.5% of participants whose Zung score was outside the normal range, 19.38% were mildly, 4.64% moderately, and 0.91% severely depressed. Statistically significant differences were observed among groups defined according to level of education, employment and marital status ($p<0.001$). Lower Zung scores were found in individuals with a higher level of education, who were unmarried, employed or still undergoing education. Multivariate logistic regression model revealed that older age ($p<0.001$), unemployment ($p=0.001$) or unmarried status ($p=0.025$) were significant predictors of depression symptoms.*

Conclusions: *The study revealed a high prevalence of depression symptoms among primary care patients who had not been previously suspected to have any psychiatric co-morbidity. Awareness of depression symptoms and disorders should be raised among general practitioners, focusing on older, unemployed and unmarried people.*

Key words: *depression - depression symptoms - primary care – prevalence - Zung scale - Croatia*

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INTRODUCTION

Depression is one of the most common mental disorders, affecting 350 million people worldwide (WHO 2012). It has become a major public health problem, demonstrating a constant increase in prevalence. Its contribution to the global burden of disease is considerable, being the single most important cause of Years Lost due to Disability (YLD) in middle and high-income countries as well as the third cause of disability worldwide and accounting for 4.3% of total Disability Adjusted Life Years (DALY) (WHO 2008). Projections are even gloomier. It is estimated that by 2030 depression-related morbidity rates will rise and depression, as one of the three leading causes of disability, will increase in significance in the total burden of disease (Mathers & Loncar 2006). It will become the principal public health problem among women, who are currently affected two times more frequently as compared to male population (WHO 2008). Moreover, depression is an important cause of work absenteeism, loss of productivity, mortality and co-morbidity such as anxiety disorders and substance abuse (Maier & Falkai 1999, Coyne et al. 1994). Up to 15% of clinically depressed and treated persons die by suicide (Bostwick et al. 2000). The percentage is estimated to be even higher among untreated patients. Furthermore, due to the high rates of recurrence and persistence of depression symptoms, depression has become a significant economic burden (Balkrishnan et al. 2008, Fostick et al. 2010) associated with substantial use of health care resources.

Global prevalence of depression is often used as a parameter for assessing the severity of depression as well as for estimating its burden for both the individual and the society. Most recent global epidemiological studies dating back to 2001 estimate the prevalence of depression to be 9.5% for women and 5.8% for men (WHO 2001). Cross-continental analyses have indicated that the prevalence of mood disorders in Europe and the US ranges from 7.6% to 11.9%, with major depressive disorder contributing 3.1% to 10.3%, respectively (Baumeister & Harter 2007, Wittchen & Jacobi 2005). The prevalence of major depressive disorder in Western European countries is around 5% (Paykel et al. 2005). Specific national surveys conducted in numerous countries have shown depression prevalence in the general population to vary from 6.6% in the USA (Kessler et al. 2003) to 5.6% in Estonia (Kleinberg et al.

2010). The prevalence is higher among the elderly, rising up to 27.0% in China (Yunming et al. 2012) and as high as 38.8% in Greece (Papadopoulos et al. 2005). Even though the prevalence results in these studies were not assessed with exactly the same instrument, the instruments based on the same short-interview model are very similar. The discrepancy between them is considered slight and their results can therefore be compared. Despite a vast international literature, only a limited number of depression surveys have been conducted in Croatia. The 2006 prevalence of mood disorders in Croatian primary health care was 4.9% (Croatian National Institute of Public Health 2007) with depression contributing with 2.2% (Stojanović-Špehar et al. 2009). It is intriguing to observe that the prevalence of depression in Croatia is currently lower than that in the majority of other countries, especially if the post-war burden with a presumed consequential slightly higher prevalence is taken into consideration. Although it has been suggested that only 50% of depressive patients are recognised in primary health care settings (Simon et al. 1999), such a study has never been performed in Croatia. This underestimated prevalence of depression is believed to be due to many causes. First, many primary care patients with depression selectively focus on somatic components of their depressive syndrome and minimise or even deny affective and cognitive symptoms (Kapfhammer 2006). It is not uncommon for symptoms such as chronic pain (Bair et al. 2003), sleep disturbances, fatigue or changes in appetite to mask an underlying depressive disorder. Depression and other medical disorders often occur concomitantly, amplifying somatic complaints. Consequently, the diagnostic focus of the primary care physicians is the dominant model of somatic disease, resulting in insufficient and low diagnostics of depressive disorder. Second, all mental disorders, including depression, are still insufficiently acknowledged in Croatian society due to cultural and social conditions, people being reluctant to talk about their mental and mood plights. Being diagnosed with a depressive disorder is considered as weakness of mental and cognitive abilities. As a consequence, a lot of people fail to realise they have a treatable illness and do not seek treatment.

Clinical depression (major depression, major depressive disorder) is a mental disorder characterised by pervasive and persistent low mood that is accompanied by low self-esteem and loss of interest or pleasure in normally enjoyable activities. It is a serious disabling condition which includes a number of symptoms and adversely affects a person's family, work or school life, sleeping and eating habits, and general health. One of the diagnostic criteria for clinical depression is the presence of depression symptoms. Although it does not necessarily indicate the presence of clinical depression, it reveals a higher possibility of having clinical depression. As described in an extensive European study (Castro-Costa et al. 2007), depression symptoms most often include 12 symptom domains: depressed mood, pessimism, suicidality, guilt, sleep, interest, irritability, appetite, fatigue, concentration, enjoyment and tearfulness. A deviation in four or more of these domains indicates probable clinical depression which requires further psychiatric evaluation. Recognition of depression symptoms should therefore be regarded as a good warning sign of clinical depression. Among the widely used instruments that enable identification of depression symptoms is the Zung Scale questionnaire (Zung et al. 1965), a useful tool for detecting patients with a higher probability of clinical depression.

In the highlights of these facts, poor detection of depression symptoms and the resulting low diagnostics of depression play an important role in the management and treatment of clinical depression. The aim of this study was to assess the prevalence of patients with unrecognised depression symptoms in general practice and identify correlated socio-demographic factors.

SUBJECTS AND METHODS

Self-rating scales have shown to be an effective and reliable way to identify depression symptoms. Even though the clinical interview by a physician is the gold standard in identifying depression, self-rating scales have some noteworthy advantages over clinically administered scales (Gelenberg 2008). They are more practical, less expensive and less time-consuming, thus being more acceptable and feasible when screening for depression symptoms in the population. The Zung Scale questionnaire used in this study is a well known self-rating scale. Several studies have already acknowledged the validity, sensitivity and reliability of this scale in estimating the frequency and severity of depression symptoms (Gabrys & Peters 1985, Dugan et al. 1998).

This study was performed in Health Centre Zagreb-Zapad, which provides health care for patients from urban and suburban region of the city of Zagreb. Sixteen general practitioners were included in the study, covering a population of approximately 27000 citizens. They were asked to choose one week in January 2011 during which they were supposed to include every fourth patient attending their office. Patients diagnosed with a psychiatric disorder were excluded from the study. Before consultation with the primary care physician, the participants were asked to complete The Zung Self-Rating Depression Scale questionnaire in the presence of a nurse, who gave them the questionnaire after determining the absence of a psychiatric disorder in the patient's medical documentation. The response rate was 92% and the most common reason for declining to complete the questionnaire was unwillingness to participate in the survey. In total, 769 patients were included. The Zung Scale questionnaire consists of 10 positively and 10 negatively phrased questions that rate the affective, psychological and somatic symptoms associated with depression. Each among the 20

questions is scored on a scale of 1 through 4, based on the following replies: "a little of the time," "some of the time," "good part of the time," "most of the time". Test scores range from 20 to 80 and are divided into two major groups: 20-49 (normal) and above 50 (depressed). The group with the depressed outcome can furthermore be divided into three ranges as follows: 50-59 (mildly depressed), 60-69 (moderately depressed) and 70 and above (severely depressed). In addition, information about the age, sex, and level of education as well as marital and employment status of every participant was acquired.

The study was approved by the Research Ethics Committee, Croatian Institute of Public Health.

Statistical analyses

All statistical analyses were performed using SAS (version 9.1.3). Normality of distribution was tested using Shapiro-Wilks test, while homogeneity of variance was tested using Levene test. Prior to further analysis logarithmic transformation of Zung score was performed. Differences between groups of independent continuous variables were analysed using t-test (for two groups) and ANOVA (for three and more groups). Post-hoc comparison was performed using Scheffe test. The level of significance of correlation between variables and the correlation trend were analysed by Pearson Test. Logistic regression analysis was performed for the prediction of the probability of depression occurrence. The predictors included in the regression analyses were age, gender, level of education, employment and marital status. An error threshold of α=0.05 was used in the interpretation of the results.

RESULTS

A total of 769 participants aged 45.56 (SD 16.63), 320 women (41.61%) and 449 men (58.39%), participated in the study and completed the questionnaire. Among them, 571 participants (74.25%, 95%CI: 72.67%-75.83%) had Zung score value in the normal range, and 149 (19.38%, 95%CI: 17.95%-20.81%) were mildly, 42 (5.46%, 95%, 95%CI: 4.64%-6.28%) moderately and 7 (0.91%, 95%CI: 0.57%-1.25%) severely depressed. The prevalence of depression symptoms according to the Zung score is presented in Figure 1. The patients that attended the primary care office were distributed unequally among level of education, employment and marital status groups. The majority of participants were employed, married and had high school or similar education. The results of student's t-test showed that although women had somewhat

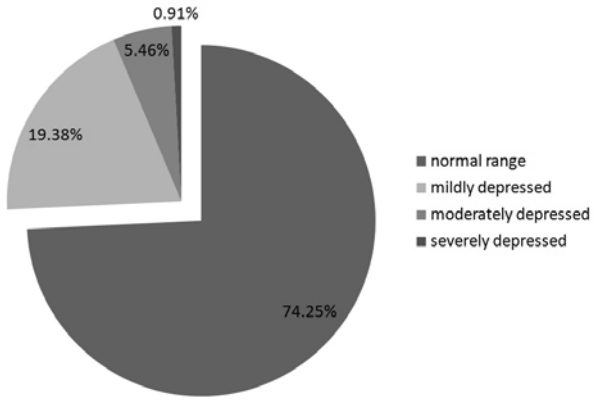

Figure 1. Prevalence of depression symptoms according to the Zung score

Table 1. Socio-demographic characteristics of the participants and differences in the Zung score between the groups

Socio-demographic descriptor/group	%*	P	Groups with significant differences in Zung score[b]
Age	45.56±16.63[a]	NA	NA
Zung score	40.09±12.43 [a]	NA	NA
Gender			
Female – 0	41.6%	0.401	
Male – 1	58.4%		
Level of education			
Incomplete primary school and primary school - 0	9.7%		
High school or similar - 1	58.2%	<0.001	0&1, 0&2, 1&2
College or University and postdoc education - 2	32.1%		
Employed			
Yes - 0	59.2%		
No - 1	11.6%	<0.001	0&1, 0&2, 1&2, 1&3, 2&3
Retired - 2	23.9%		
In school - 3	5.3%		
Marital status			
Married - 0	59.9%		
Unmarried - 1	26.8%	<0.001	0&1, 0&2, 1&2, 1&3
Widow - 2	7.4%		
Divorced - 3	5.8%		

*Data are presented as proportion (%) unless noted otherwise; [a] Mean (± standard deviation);
[b]Pairs with significant differences between groups; post-hoc analysis - Scheffe Test

Table 2. Multivariate logistic regression model with depression as the outcome variable

Socio-demographic descriptor/group	Odds ratio	95% CI	P
Age	1.060	1.040-1.081	<0.001
Gender			
Female	1		
Male	1.293	0.889-1.881	0.178
Level of education			
Incomplete primary school and primary school	1		0.115
High school or similar	1.081	0.594-1.967	0.799
College or University and postdoc education	0.692	0.360-1.330	0.269
Employed			
Yes	1		0.008
No	2.560	1.474-4.444	0.001
Retired	1.308	0.726-2.356	0.371
In school	0.938	0.256-3.421	0.922
Marital status			
Married	1		0.068
Unmarried	1.839	1.080-3.132	0.025
Widow	0.642	0.329-1.251	0.193
Divorced	1.314	0.619-2.791	0.477

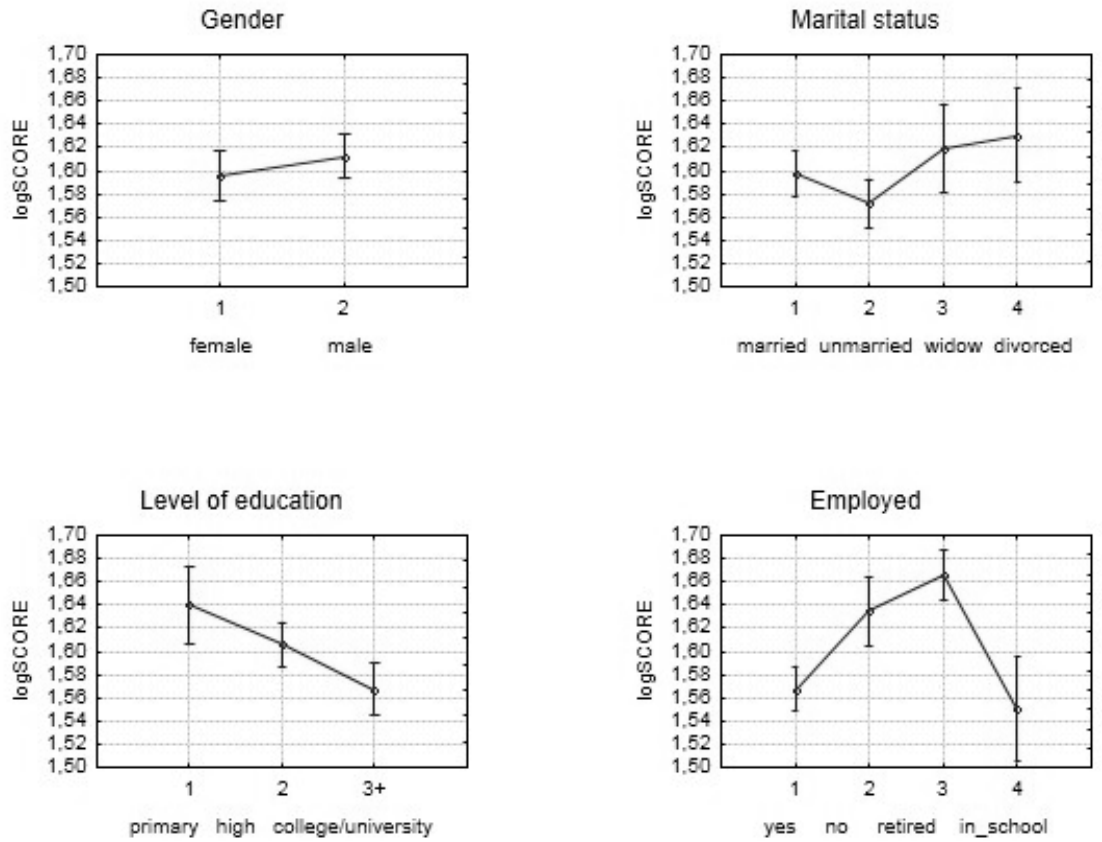

Figure 2. Zung score values in different groups according to gender, marital status, level of education and employment status (means and 95% CI)

lower scores, there was no significant difference between men and women (p=0.401). On the other hand, there was a statistically significant difference in Zung score values among groups with different employment status, marital status, and level of education (all p's<0.001). The level of education was inversely related with the Zung score, revealing the lowest score in the group with the highest level of education, in unmarried participants and in those who were employed or still undergoing education. In addition, there was a statistically significant positive correlation between age and Zung score (p<0.001, r=0.409). Socio-demographic characteristics of the participants and between-group differences in the Zung score are shown in Table 1 and Figure 2.

Multivariate logistic regression model ($p<0.001$, R2 adjusted =21%) suggested that older age, unemployment or unmarried status were significant predictors of being depressed. The results of the multivariate logistic regression are presented in Table 2.

DISCUSSION

The results of this study revealed that 25.5% of primary care patients with somatic complaints but without known psychiatric disorders or complaints had mild, moderate or severe depression symptoms according to The Zung score. Although this does not necessarily indicate the presence of a depressive disorder, the percentage itself is alerting, taking into consideration the results from a national USA survey which did not exclude participants diagnosed with a depressive disorder, where 20.1% of participants reported significant depression symptoms (Shim et al. 2011). The study revealed older age as a significant predictor of the onset of depression symptoms, which is in consistence with previous investigations (Lindeman et al. 2000, Zung et al. 1993). The observed correlation between age and depression symptoms is a result of a wide range of exogenous factors, primarily of increasingly stressogenic life conditions as well as changes in value systems and lifestyle. Age-related increase in chronic conditions and functional disability plays an important role in the onset of depression symptoms (Prince et al. 1998). Poor general health, somatic comorbidities and chronic pain decrease the quality of life, thus affecting patients' mental health. Moreover, retirement, loss of loved ones, compromised social support and various other socioeconomic factors lead to deterioration of life perspective and contribute to the onset of depression symptoms. Some studies have also suggested that depressogenic medications, used increasingly with age, are an independent and clinically relevant aetiological factor (Dhondt et al. 1999). As expected from the literature, unemployment was also shown to be a significant predictor of depression (Pelzer et al. 2013). Work and employment provide financial stability and incite feelings of self-esteem, high self-regard and respect. Consequently, unemployment as an important stressor directly affects mental health and triggers depression (Skapinakis et al. 2013). The unemployment rate in Croatia might therefore play a role as a risk factor in the onset of depression symptoms. It is sometimes difficult to determine the causal influence and ascertain whether unemployment is caused by initially unrecognised depression or whether depression is induced by long-term unemployment. Whereas depression symptoms lead to absenteeism and decreased performance and productivity, which eventually contribute to decline in efficiency and loss of job, job loss along with unsuccessful search for employment evokes the feelings of hopelessness, embarrassment, defeat, frustration and anxiety, all resulting in worsening of mental health. In line with research suggesting that being unemployed almost doubles a person's chance of a major depressive episode (Hämäläinen et al. 2005), the high unemployment rate in Croatia may be responsible for the observed high prevalence of depression symptoms in this study. The results also indicating that unmarried people in Croatia have the highest risk of developing depression symptoms are in agreement with other reports (Inaba el al. 2005, Scarinci et al. 2002). The risk was found to be higher in people who were never married than in those who were married, divorced or widowed, which might be attributed to a reflection of unfulfilled inner needs. While divorce and spouse loss are major stressful events, they represent life episodes, which deteriorate over time as opposed to permanent emotional frustration generated by unmarried marital status. Married people are considered to be emotionally less damaged by stressful experiences than unmarried ones. Marriage provides greater emotional, financial and social support, which creates better psychosocial coping resources for everyday challenges (Simon 2012). Our findings that older age, unemployment and unmarried marital status are three significant predictors of the onset of depression symptoms in Croatia is consistent with numerous epidemiological studies of depression symptoms and disorders (Kessler et al. 1992). In addition, the association between the level of education and depression symptoms pointed to an interesting detail. Although statistically insignificant after controlling for other confounding variables, it showed that people with college or university education had the lowest risk of developing depression symptoms. This might be attributed to higher income and socio-economic stability, the decrease of which is an important psycho-reactive factor in countries affected by economic crisis such as Croatia. More accessible health care services among persons with higher level of education might also play a role in reducing depression risk factors.

Although the Zung Self-Rating Depression Scale questionnaire has not been validated in Croatian population, the use of a self-rating scale in general practice might enable early detection of depression symptoms, hence preventing the development of a depressive disorder, including its severe forms. Moreover, avoiding unnecessary diagnostics in patients with predominantly somatic symptoms could reduce health care expenditure. It would, therefore, be important to extend this study and investigate the prevalence of depressive disorders among patients who were found to have depression symptoms and thus assess reliability of the Zung self-rating scale.

CONCLUSIONS

This study revealed a high prevalence of depression symptoms among primary care patients who had not been previously suspected to have any psychiatric comorbidity, and pointed to the importance of recognizing

depression symptoms in the general practice. Increasing global prevalence of depression symptoms and disorders demands optimization of depression recognition and treatment in general practice with the aim of improving patient outcome and reducing health care expenditure. Educational and informative programmes should be employed to raise general practitioners' awareness of the presence, manifestations, recognition and treatment of depression symptoms and disorders. Depression screening strategies should also be implemented to improve the management of these disorders and facilitate the diagnosis in the general practice settings, focusing on older, unemployed and unmarried people who are at an increased risk of developing depression symptoms. The Zung Depression Scale might serve as a very useful tool for population screening and unravelling those in need for further medical diagnostics and treatment.

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References

1. *Bair MJ, Robinson RL, Katon W & Kroenke K: Depression and pain comorbidity: a literature review. Arch Intern Med 2003; 163:2433-45.*
2. *Balkrishnan R, Joish VN, Yang T, Jayawant SS & Mullins CD: The economic burden associated with SSRI treatment failure in a managed care population. J Med Econ 2008; 11:601–610.*
3. *Baumeister H & Harter M: Prevalence of mental disorders based on general population surveys. Soc Psychiatry Psychiatr Epidemiol 2007; 42:537–546.*
4. *Bostwick JM & Pankratz VS: Affective disorders and suicide risk: a reexamination. Am J Psychiatry 2000; 157:1925-32.*
5. *Coyne JC, Fechner-Bates S & Schwenk TL: Prevalence, nature and comorbidity of depressive disorders in primary care. Genl Hosp Psychiatry 1994; 16:267-276.*
6. *Dhondt T, Derksen P, Hooijer C, Van Heycop Ten Ham B, Van Gent PP, Heeren T: Depressogenic medication as an aetiological factor in major depression: an analysis in a clinical population of depressed elderly people. Int J Geriatr Psychiatry 1999; 14:875-81.*
7. *Dugan W, Mcdonald MV, Passik SD, Rosenfeld BD, Theobald D & Edgerton S: Use of the Zung Self-Rating Depression Scale in cancer patients: feasibility as a screening tool. Psychooncology 1998; 7:483-93.*
8. *Fostick L, Silberman A, Beckman M, Spivak B & Amital D: The economic impact of depression: Resistance or severity? Eur Neuropsychopharmacol 2010; 20:671–675.*
9. *Gabrys JB & Peters K: Reliability, discriminant and predictive validity of the Zung Self-rating Depression Scale. Psychol Rep 1985; 7:1091-6.*
10. *Gelenberg AJ: The search for knowledge. developing the American Psychiatric Association's practice guideline for major depressive disorder. J Clin Psychiatry 2008; 69:1658-9.*
11. *Hämäläinen J, Poikolainen K, Isometsä E, Kaprio J, Heikkinen M, Lindeman S et al.: Major depressive episode related to long unemployment and frequent alcohol intoxication. Nord J Psychiatry 2005; 59:486-91.*
12. *Hrvatski zdravstveno-statistički ljetopis za 2006. godinu. Croatian National Institute of Public Health 2007.*
13. *Inaba A, Thoits PA, Ueno K, Gove WR, Evenson RJ & Sloan M: Depression in the United States and Japan: gender, marital status, and SES patterns. Soc Sci Med 2005; 61:2280-92.*
14. *Kapfhammer HP: Somatic symptoms in depression. Dialogues Clin Neurosci 2006; 8:227-39.*
15. *Kessler RC, Berglund P, Demler O, Jin R, Koretz D, Merikangas KR et al.: National Comobordity Survey Replication. The epidemiology of major depressive disorder: results from the National Comorbidity Survey Replication (NCS-R). JAMA 2003, 289:3095–3105.*
16. *Kessler RC, Foster C, Webster PS & House JS: The relationship between age and depressive symptoms in two national surveys. Psychol Aging 1992; 7:119-26.*
17. *Kleinberg A, Aluoja A & Vasar V: Point prevalence of major depression in Estonia. Results from the 2006 Estonian Health Survey. Eur Psychiatry 2010; 25:485-90.*
18. *Lindeman S, Hämäläinen J, Isometsä E, Kaprio J, Poikolainen K, Heikkinen M et al.: The 12-month prevalence and risk factors for major depressive episode in Finland: representative sample of 5993 adults. Acta Psychiatr Scand 2000; 102:178-84.*
19. *Maier W & Falkai P: The epidemiology of comorbidity between depression anxiety disorders and somatic diseases. Int Clin Psychopharmacol 1999; 14:1–6.*
20. *Mathers CD & Loncar D: Projections of Global Mortality and Burden of Disease from 2002 to 2030. PLoS Med 2006; 3:442.*
21. *Papadopoulos FC, Petridou E, Argyropoulou S, Kontaxakis V, Dessypris N, Anastasiou A et al.: Prevalence and correlates of depression in late life: a population based study from a rural Greek town. Int J Geriatr Psychiatry 2005; 20:350-7.*
22. *Paykel ES, Brugha T & Fryers T: Size and burden of depressive disorders in Europe. Eur Neuropsychopharmacol 2005; 15:411-423.*
23. *Pelzer B, Schaffrath S & Vernaleken I: Coping with unemployment. The impact of unemployment on mental health, personality, and social interaction kills. Work 2014;48:289-95.*
24. *Prince MJ, Harwood RH, Thomas A & Mann AH: A prospective population-based cohort study of the effects of disablement and social milieu on the onset and maintenance of late-life depression. The Gospel Oak Project VII. Psychol Med 1998;28:337-50.*
25. *Scarinci IC, Beech BM, Naumann W, Kovach KW, Pugh L & Fapohunda B: Depression, socioeconomic status, age, and marital status in black women: a national study. Ethn Dis 2002; 12:421-8.*
26. *Shim RS, Baltrus P, Ye J, Rust G: Prevalence, treatment, and control of depressive symptoms in the United States: results from the National Health and Nutrition Examination Survey (NHANES), 2005-2008. J Am Board Fam Med. 2011; 24:33-8.*

27. Simon GE, Goldberg D, Tiemens BG & Ustun TB: Outcomes of recognized and unrecognized depression in an international primary care study. Gen Hosp Psychiatry 1999, 21:97-105.
28. Simon RW: The Relationship between Marriage and Mental Health. Psychiatry Weekly 2012; 7.
29. Skapinakis P, Bellos S, Koupidis S, Grammatikopoulos I, Theodorakis PN & Mavreas V: Prevalence and sociodemographic associations of common mental disorders in a nationally representative sample of the general population of Greece. BMC Psychiatry 2013; 13:163.
30. Stojanović-Špehar S, Blažeković-Milaković S, Amerl-Šakić V, Kolić N, Supe S: Depression prevalence and estimation of psychosocial parametera within adult population in city of Zagreb. Psychiatr Danub 2009; 21: 497-507.
31. Wittchen HU & Jacobi F: Size and burden of mental disorders in Europe - a critical review and appraisal of 27 studies. Eur Neuropsychopharmacol 2005; 15:357–376.
32. World Health Organization: The World Health Report 2001: Mental Health: New Understanding, New Hope. 2001.
33. World Health Organization: The global burden of disease: 2004 update. Accessed on the 14th of May 2014. http://www.who.int/healthinfo/global_burden_disease/2004_report_update/en/
34. World Health Organization: Facts sheet No 369 – Depression. Accessed on the 18th of May 2014. http://www.who.int/mediacentre/factsheets/fs369/en/
35. Yunming L, Changsheng C, Haibo T, Wenjun C, Shanhong F, Yan M et al.: Prevalence and risk factors for depression in older people in Xi'an China: a community-based study. Int J Geriatr Psychiatry 2012; 27:31-9.
36. Zung WW, Broadhead WE & Roth ME: Prevalence of depressive symptoms in primary care. J Fam Pract 1993; 37:337-44.
37. Zung WW, Richards CB & Short MJ: Self-rating depression scale in an outpatient clinic. Further validation of the SDS. Arch Gen Psychiatry 1965; 13:508-15.

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