Research Articles

Gender Differences in Depression Symptoms: Findings From a Population Survey in Kosovo – A Country in Transition

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Abstract

This paper focuses on gender differences in depression symptoms. It takes into consideration relevant contextual factors of a country in transition. This paper’s analyzed data was extracted from European Social Survey, Sixth Round (ESS-6). ESS uses strict probability samples of the resident national population, aged 15 or older, and living in private households. Females reported a significantly higher mean depression on average (M = 8.14; SD = 3.88) compared to males (M = 7.56; SD = 3.86) at t(1247) = 2.604, p < .009. The average for depressive symptoms found in the Kosovar population was higher than the averages reported in other European countries, but corresponded with those in Eastern European countries.

Keywords: gender differences, depression symptoms, transition, Kosovo

Introduction

Depression is shown to be among the most significant public health concerns guiding the disease burden around the globe (Ferrari et al., 2013; Moussavi et al., 2007). The prediction is that by 2030 depression together with HIV/AIDS and ischemic heart disease will be the leading cause of illness (Mathers & Loncar, 2006). Regardless of its impact, the scale and decisive factors of depression are not fully explored in developing countries such as Kosovo. This is particularly the case in Kosovo, the newly created country in South Eastern Europe. Research evidence shows few estimates of mental health disorders or symptoms in Kosovo (Brisson, Arënliu, & Plattaïs, 2009; Lopes Cardozo, Vergara, Agani, & Gotway, 2000), but the methodology is not uniform, and a cross-country comparative analysis is not easy at all. With the aim of adding to existing evidence, depressive symptoms were explored in the general population utilizing the European Social Survey data, which employs standardized methodology across European countries and ensures a measure of reliability in comparisons across countries. Specifically, the current study examines gender differences in depressive rates and the interaction of education and other socio-economic variables with depression symptoms in the Kosovo general population.
Gender Differences in Depressive Symptoms Worldwide

Research evidence shows that gender differences in depression as well as its symptoms are well documented worldwide (Angst et al., 2002; Essau, Lewinsohn, Seeley, & Sasagawa, 2010; Marcus et al., 2008; The ESEMeD/MHEDEA 2000 Investigators et al., 2004; Van de Velde, Bracke, & Levecque, 2010). Findings from the study conducted by Van de Velde, Bracke, and Levecque (2010) in 23 European countries, which aimed to analyze cross-national gender gaps in depression, showed that the largest differences were found in South-Eastern European countries and the minimum such differences in Ireland, Slovakia and a few Nordic countries. In contrast, findings from the ODIN study reveal that lower depression scores were shown in Nordic countries while the opposite was reported by Anglo-Saxon respondents (Ayuso-Mateos et al., 2001). Conversely, further studies revealed that the largest and smallest gender differences were found in Northern and Southern European countries (Hopcroft & Bradley, 2007; Immerman & Mackey, 2003; Mavreas, Beis, Mouyias, Rigoni, & Lyketsos, 1986). Findings from the study conducted by Hopcroft and Bradley (2007), which aimed at understanding gender differences in symptoms of depression, showed no countries where males had a greater extent probability for depression as opposed to females. The study was conducted in 29 different countries comprising developed, high gender equity and less-developed, low gender equity countries. Besides, higher depression levels were found in later countries, while the maximum differences in depression were noticed in the former countries. Scholars following different theoretical frameworks provided various biological, psychological and sociological explanations (Nolen-Hoeksema & Aldao, 2011; Parker & Brotchie, 2010) in their attempts to explain gender differences. Even though the above-mentioned theoretical explanations provided valuable insights on key issues concerning these differences in the experience of depression, it is also important to consider other theoretical approaches such as the gendered approach, specifically when taking into account the socially constructed nature of gender. A gendered approach improves understanding of the epidemiology for mental disorders and treatments, and increases awareness on the contribution of gender inequality to health outcomes (Afifi, 2007). Taking into account that gender interacts with other social determinants; gender differences related to depression levels among European countries were explained by the variation within countries in socio-economic and cultural factors. For example, good socio-economic factors are linked with a smaller extent of depression for men and women, whereas education predicts a greater degree depression for women in comparison to men (Kamin, Berzelak, & Ule, 2012; Van de Velde, Bracke, & Levecque, 2010). Moreover, findings from the study on macro-level factors of depression in both genders, using data from the European Social Survey (2006-2007), indicates a relationship between gender equality and lower levels of depression (Jowell & the Central Co-ordinating Team, 2007; Van de Velde, Huijts, Bracke, & Bambra, 2013). On the contrary, some studies have shown that women’s and men’s mental health might be negatively influenced by enlargement of macro-level gender equality due to an increase in choices, conflicts and alternate values (Hopcroft & Bradley, 2007). As a result, women might become increasingly burdened and adopt new, more stressful behaviors, whereas men, sensing a threat, may feel a loss of privileges (Backhans, Lundberg, & Månsdotter 2007). Additionally, findings from other studies show that socio-economic and family-related factors facilitate the gender-depression correlation (Van de Velde, Bracke, & Levecque, 2010). Another study conducted in Slovenia looked at country-specific factors associated with depression in the general population, and found that higher education contributed to lower levels of depression in women and men; however, its effects were shown to be substantially higher among women (Kamin, Berzelak, & Ule, 2012). This study also indicated that the absence of partnership was associated with higher levels of depression. Similar findings were found in Belgium, where decreased material standards and other life circumstances, such as living without a partner, were strongly associated with depression scores (Lorant et al., 2007). Furthermore, it is well documented that separated, divorced or widowed individuals show a higher
prevalence of major depression than married individuals (Bulloch, Williams, Lavorato, & Patten, 2009). Marriage has been found to be a protective factor against depression (Bebbington, 1996; Kawachi & Berkman, 2001), but other studies that analyzed links between different variables and depression showed that marriage negatively influenced the mental health of men (Almeida-Filho et al., 2004).

**Kosovo Context and Background Studies**

In the aftermath of war, Kosovo like many other postwar societies is experiencing many challenges, including economic stagnation, widespread poverty, high unemployment, population movement from rural to urban areas, poor quality of life, and pervasive discrimination (The World Bank Group in Kosovo, 2015). All these challenges together with traumatic experiences of war have a negative impact on the well-being of children and their families, ranging from specific phobias to severe mental health problems including PTSD, anxiety, depression and substance use (Jones & Kafetsios, 2005; Thabet & Vostanis, 2005; Thabet & Vostanis, 2011). Findings from one of the first studies, conducted with a population of 1358 Kosovo Albanians aged 15 years or older selected through random sampling, identified that 17.1% of respondents met the criteria for identification with PTSD, whereas women (19.7%) showed higher prevalence rates of PTSD in comparison to men (12%) (Lopes Cardozo, Vergara, Agani, & Gotway, 2000). Another study conducted by Salama, Spiegel, Van Dyke, Phelps, and Wilkinson (2000) in Kosovo reported a high prevalence of social dysfunction and severe depression, especially among the women.

In 2006, the Kosovo Rehabilitation Center for Torture Victims conducted a study to understand the characteristics of mental health and social dysfunction related to social and geographical nature in a sample of 1161 participants selected through cluster sampling (Kosova Rehabilitation Center for Torture Victims & Danish Refugee Council, 2006). Findings from the study showed that 25.8% of the population reported a moderate nonspecific psychiatric morbidity, while 27.7% showed the presence of substantial psychiatric morbidity. Besides, the same study revealed that 22% of the population was experiencing PTSD symptoms, while 41.8% were showing depression and 43.1% were showing signs of emotional distress (Kosova Rehabilitation Center for Torture Victims & Danish Refugee Council, 2006). Epidemiological study findings related to prevalence rates of mental disorders in some Balkan countries (Bosnia-Herzegovina, Croatia, Kosovo, Macedonia, and Serbia) targeted a sample composed of adults who were personally exposed to armed conflict or who continued to live in such an environment. The study shows interesting prevalence rates. For example, anxiety disorder rates ranged between 15.6%-41.8%; rates of mood disorders ranged between 12.1%-47.6% and rates of substance use were 0.6%-9.0% (Priebe et al., 2010). Specifically, findings from this study showed that 47.6% of participants experienced mood disorders, whereas 41.8% showed symptoms of anxiety disorders (Priebe et al., 2010).

Besides, Kosovo, like many other societies, has maintained a culture characterized to a great extent by patriarchy, evidenced by traditional norms and strictly defined gender roles. Findings from the latest country gender profile (Färnsveden, Qosaj-Mustafa, Farnsworth, & Nordlund, 2014), which aimed to analyze gender differences at all levels with regard to national framework, human rights, politics, and socioeconomic circumstances, show that the situation is rather challenging even 15 years after the war. Specifically, findings show that: 30% of Kosovo citizens lived in poverty; of these, 38% were women heading households, 10% of them under extreme poverty; only 18% of women in comparison to 55% of men participated in the formal labor market; only 8% of properties were owned by women, and women led fewer than 10% of businesses (Färnsveden, Qosaj-Mustafa, Farnsworth, & Nordlund, 2014). Besides the above-mentioned challenges, specific positive changes occurred in education: Since 2003 the literacy rate improved, especially for young people, and dropout rates in secondary schools for young girls.
decreased since 2009 (Färnsveden et al., 2014, p. 19). Moreover, reports on education from the Kosovo Agency of Statistics show an increase over the years in the percentage of females in upper secondary schools, whereas data on higher education show that half of undergraduate students are women (Kosovo Agency of Statistics, 2014). All these conditions, accompanied by the social activism of many non-governmental organizations in promoting gender equality, contributed to the empowerment of women in Kosovo society, which contributed to changes in gender roles and the breaking of traditional and patriarchal attitudes that governed social life (Krasniqi, 2009). As noted by Krasniqi (2009): tolerant attitudes toward employment of women, and an increased level of women’s education in our society, contributed to a shift from traditional division of labor in the family toward the Western model of functioning, where indoor responsibilities are usually not reserved for men (p. 126). However, research evidence shows that changes related to gender roles might cause a certain degree of distress and crisis for men's masculine identity due to difficulties in upholding masculine gender norms (Gallagher & Parrott, 2011; Moore & Stuart, 2005), consequently having a negative impact in risk factors, stress and mental health (Vandello & Bosson, 2013). Therefore, in the context of rapid socio-cultural changes in a post-war society, it was considered necessary to assess the prevalence of gender differences and interaction of education and other socio-economic variables with depressive symptoms in the Kosovo general population.

**Method**

The data used for analysis in this paper was taken from the European Social Survey (the sixth round - ESS-6); Kosovo participated for the first time in 2012. The sampling methodology consisted of participants of strict probability sampling with a minimum age of 15 years who were part of private households. The data collection method was F2F interviews. 1295 participants were selected by stratified random sampling, with an age range from 16 to 89 and average age 43.22, of which 47.7% were male and 52.3% were female. Analysis of the data for purposes of this paper was restricted to respondents aged 18 to 75 ($n = 1249$); the average age of respondents resulted in $M = 44.22$, $SD = 17.07$, of which 47.6% ($n = 592$) were male and 52.4% ($n = 653$) were female from $N = 1245$ valid cases.

**Measures**

The brief version of Epidemiologic Studies – Depression (CES-D) was used to measure depression with eight items measuring depressive symptoms, aiming to identify populations at risk for development of depressive illnesses (Radloff, 1977). The translation and adaption of the European Social Survey questionnaire followed the requirements outlined in the specifications for participating countries, and used TRAPD methodology (Translation, Review, Adjudication, Pretesting and Documentation), aiming to achieve equivalence in regard to its translation (Dorer, 2012). Participants answered questions related to whether they had feelings or behaviors of a specific kind (depressive feelings, poor sleeping, feelings of loneliness and sadness, feelings of happiness and enjoyment of life) within seven days before the survey. Participants had to rate frequency of the symptoms’ occurrence on a rating scale of 0 – 3, the former meaning no symptoms or almost none for the indicated time, and the latter indicating continuance of symptoms during the whole period. Cronbach Alpha for the eight items measuring depression resulted in .80. The individual scores ranged from 0 to 24; higher scores indicated higher levels of depression. Cases missing more than five items were deleted from the database, and the other missing values were replaced with series means as conducted in the Van de Velde, Bracke, and Levecque (2010) study. The missing values for items measuring depression ranged from 0.4% for Item 4 up to 3% for Item 2.
Other variables were taken from the same database and treated as independent variables, including: gender, age (continuous variable), employment status (employed, unemployed, retired, sick or disabled, doing housework, and others, including military or other forms of service), income (measured in decile 10 as continuous variable), marital status (never married, married, widowed or divorced), years of education (as continuous variable) and children under 12 years of age in the family.

Data Analysis
Initially we looked at the mean differences between gender and education level, whereas the educational level for mean comparisons was measured in three levels: primary (or lower), secondary, and higher education. In the second section of results, findings from the regression model used linear modeling where all independent variables were entered.

Results
The mean depression for the whole sample was $M = 7.87; SD = 3.88$. The females on average reported a significantly higher mean depression ($M = 8.14; SD = 3.88$) compared to males ($M = 7.56; SD = 3.86$), at $t(1247) = 2.604, p < .009$, Cohen’s $d = 0.15$, which indicates a small effect size. We also looked at education level of the sample and compared the mean scores for depression, based on participants’ education. Education was re-coded into three main categories: no primary school or only primary school completed, high school completed, and university or higher degree obtained. Table 1 presents the mean scores for depression based on education level of the whole sample, and separately for males and females. As can be seen in Table 1, participants with lower levels of education generally reported higher depression symptoms than those with more years of education; this remained consistent for both genders. The one-way ANOVA was used to test depression scores among the three education groups for the whole sample. Depression scores differed significantly among the three education groups; $F(2, 1242) = 53.80, p < .001, \eta^2 = 0.13$, indicating small effect size.

Table 1

| Education                     | Women     | Men     | Total  |
|-------------------------------|-----------|---------|--------|
|                               | $M$       | $SD$    | $n$    | $M$ | $SD$ | $n$ | $M$ | $SD$ | $n$ |
| Primary or no formal education | 9.08      | 3.63    | 350    | 9.07 | 4.14 | 165 | 9.08 | 3.80 | 515 |
| High school                   | 7.35      | 3.97    | 249    | 7.20 | 3.64 | 367 | 7.26 | 3.77 | 616 |
| University or higher          | 5.82      | 3.28    | 54     | 5.72 | 2.89 | 60  | 5.77 | 3.07 | 114 |
| Missing                       | —         | —       | 2      | —   | —    | 2   | —   | —    | 4   |
| Total                         | 8.10      | 3.88    | 655    | 7.56 | 3.86 | 594 | 7.86 | 3.88 | 1249 |

One-way ANOVA was also used to compare depression symptoms among education groups, separately for men and women. The results yielded significant differences for education groups in depression scores for women, $F(2, 650) = 27.28, p < .001, \eta^2 = 0.29$, indicating small effect size; and similar group differences for males were found; $F(2, 589) = 22.85, p < .001, \eta^2 = 0.33$, indicating moderate effect size. The post hoc analysis yielded significant group differences where those with lower education levels showed significantly lower means, compared to both
groups. However, no significant mean differences in depression scores resulted when we looked only for men and women with university education $t(112) = -0.166, p = .869, \text{Cohen’s } d = 0.02$, indicating no effect size.

To better understand the impact of education and other socio-economic factors on depression, a General Linear Model (GLM) was employed to learn the effect of age, years of education, income reported in 10 deciles as a continuous variable, gender, and marital status of participants.

In Table 2, results are presented from a general linear model (GLM), covering the general population in Kosovo, with separate analysis results for both genders. Unexpectedly, scores derived from applying regression analysis showed no significant association between gender and depression in relation to the general population. Besides, as expected, an increase in education and income significantly decreased depression scores, whereas increasing age increased depression scores. Doing housework, being retired, being sick, disabled and unemployed significantly increased depression scores for the general population, in comparison to being employed. In terms of marital status, being single, widowed or divorced increased depression scores compared to being married in the general population.

### Table 2

| Variable                        | Total sample | Women | Men  |
|---------------------------------|--------------|-------|------|
|                                 | $\beta$ (SE) | $p$   | $\beta$ (SE) | $p$ | $\beta$ (SE) | $p$ |
| Gender (female)                 | 0.19 (0.25)  | n.s.  | 0.03 (0.01) | .04 | 0.06 (0.01) | .001 |
| Age                             | 0.04 (0.10)  | .001  | -0.35 (0.08) | .002 | -0.32 (0.08) | .001 |
| Income                          | -0.34 (0.05) | .002  | -0.04 (0.52) | n.s. | -0.13 (0.05) | .05 |
| Years of education              | -0.08 (0.04) | .03   | n.s.       | n.s. | n.s.       | n.s. |
| Employment                      |              |       |            |     |            |     |
| Other                           | -1.79 (3.40) | n.s.  | -1.85 (3.40) | n.s. | n.s.       | n.s. |
| Housework                       | 1.47 (0.35)  | .001  | 1.40 (0.49) | .03 | 1.75 (0.76) | .05 |
| Retired                         | 1.11 (0.45)  | .02   | 0.88 (0.78) | n.s. | 0.81 (0.58) | n.s. |
| Sick/Disabled                   | 2.10 (1.02)  | .01   | 2.87 (1.80) | n.s. | 1.57 (1.20) | n.s. |
| Unemployed                      | 1.37 (0.31)  | .003  | 1.10 (0.55) | .05 | 1.35 (0.38) | .005 |
| Education                       | 0.55 (0.49)  | n.s.  | 0.72 (0.77) | n.s. | 0.32 (0.63) | n.s. |
| Employed (default)              | R            |       | R          |     | R          |     |
| Marital status                  |              |       |            |     |            |     |
| Single                          | 0.68 (0.32)  | .04   | 0.35 (0.46) | n.s. | 1.32 (0.47) | .05 |
| Widowed                         | 1.36 (0.44)  | .004  | 1.26 (0.56) | .03 | 2.36 (0.83) | .05 |
| Divorced                        | 2.90 (0.71)  | .001  | 2.65 (0.95) | .004 | 3.42 (1.09) | .003 |
| Married (default)               | R            |       | R          |     | R          |     |
| Having children under 12 in family | -0.13 (0.22) | n.s.  | -0.37 (0.31) | n.s. | 0.12 (0.32) | n.s. |

Note. R: reference category.

Gender had no direct impact on depression scores in the general population but a comparison was conducted separately for women and men, indicating some gender differences: Education and being single were not associated with depression scores for females, whereas they were associated with depression scores for males. Otherwise, increase in age, decrease in income, doing housework and being unemployed, widowed and divorced did associate...
significantly with depression scores for both genders. In summary the findings, as expected, didn’t indicate gender to be a risk factor.

**Discussion**

Considering that the measure used for assessing depressive symptoms in the general population is similar to that used in other European countries (Kamin, Berzelak, & Ule, 2012; Van de Velde, Bracke, & Levecque, 2010; Van de Velde, Huijts, Bracke, & Bambra, 2013), the averages found in Kosovo were high compared to averages reported from other European countries (Van de Velde, Bracke, & Levecque, 2010). In the mentioned study, averages from Kosovo correspond with average scores found in Eastern Europe, ranging from 8.12 for Hungary to 6.55 in Poland (Van de Velde, Bracke, & Levecque, 2010). In Kosovo, the average for the general population was 7.86. In this regard, it is important to emphasize that Kosovo is characterized by economic stagnation, widespread poverty, high unemployment and poor quality of life (United Nations Development Program, 2011). These contextual factors appear to be important risk factors for common mental health disorders (anxiety and/or depression), according to findings from the meta-analytic review of European population studies (Patel & Kleinman, 2003) in the last 25 years. Findings from this study show that, in developing countries, people with low socio-economic status, poor education, material disadvantages and unemployment show increased frequencies of depression and anxiety.

Gender was not shown to be associated with depression scores. Another study’s results (Van de Velde, Bracke, & Levecque, 2010) might serve as a possible explanation for this study’s results. Socio-economic factors appear to moderate the relationship between gender and depression. Furthermore, results of the studies conducted by Fischer and Manstead (2000), Hopcroft and Bradley (2007) suggest that levels of depression increase in low gender-equity societies, and that the gender gap for depression increases in high gender equity societies. One explanation for these differences is provided by findings from another study, which show that in low gender-equity countries women might expect less compared to those in developed countries, and thus they feel less distress (Hopcroft & Bradley, 2007). Similarly, findings from another study that used data from the World Value Survey in 23 countries, and the National Survey of Families and Households, show that the gender gap for feelings of depression is greater in gender-equity societies, even though the levels of depression are lower in total (Hopcroft & McLaughlin, 2012). On the other hand, other findings show that macro-level gender equality is related to lower levels of depression in both men and women, since gender equality contributes to good mental health. At the same time, gender equality in specific dimensions for specific social groups is associated with higher levels of depression and reduction of gender differences in depression (Van de Velde, Huijts, Bracke, & Bambra, 2013).

Kosovo, since the end of the war in 1999, has experienced rapid social and cultural change. To some degree, the percentage of females in higher education and employment has increased since the pre-war period and birth rates have decreased by 30% since the end of the war (Azemi, Gashi, Berisha, Kolgeci, & Ismaili-Jaha, 2012). As a result, women in Kosovo have experienced a certain level of de-familiarization (Van de Velde, Bracke, & Levecque, 2010). These contextual aspects, characterized by transitional roles that men and women in Kosovo are experiencing, appear to produce adverse effects for both men and women. Moreover, according to results from another study, it is assumed that men would experience relative loss since they would have to give up traditional masculine privileges while failing to adapt to traditional female roles (Moore & Stuart, 2005; Vandello & Bosson, 2013). On the other hand, women would find greater opportunities and higher incomes, and thus experience
increased stress and pressure (Backhans, Lundberg, & Månsdotter, 2007). As a result, both men and women experience higher levels of depression, eventually decreasing the gender gap.

It is interesting to note that education appears non-protective against high depression scores in women as opposed to men. This finding is not compatible with those from other studies. One possible explanation is based on the assumption that the recent transformation of traditional female roles in education and employment does not necessarily include transformation in the private sphere. As a result, women still adhere to traditional roles and at the same time face increased social pressure. Another explanation might be the relatively low level of education among females, reported in this study, where 54.5% of females had only a primary or lower education, compared to 30% of males in the sample, whereas the percentage of women with university education is almost equal to males. This increase in the level of university education amongst women is especially valid from the end of the war in 1999 (Kosovo Agency of Statistics, 2014). It is important to mention again that women with a university education had no significant mean difference in depression scores compared to males, indicating that higher education is a protective factor for women.

Similar to findings from other studies, having children above 12 years old appeared not related to depression, regardless of gender (Evenson & Simon 2005; Van de Velde, Bracke, & Levecque, 2010). This could be explained by the assumption that in Kosovar society family ties are still important, with help and support available to parents. Hopcroft and McLaughlin (2012) gave a similar explanation when discussing gender gap in depression and effects of children on psychological well-being, in 23 European countries. Moreover, research shows that children in traditional societies are considered an asset rather than an economic burden (Caldwell 1976a; Caldwell 1976b). At the same time, being widowed or divorced seems to be associated with depression for both genders, showing a greater effect on men than on women (Symoens, Van de Velde, Colman, & Bracke, 2008), and being single is negatively associated with depression for women but not for men (Paykel, Brugha, & Fryers, 2005).

The present findings suggest that women report higher levels of depressive symptoms compared to men, as in other countries (Kamin, Berzelak, & Ule, 2012; Van de Velde, Bracke, & Levecque, 2010; Van de Velde, Huijts, Bracke, & Bambra, 2013). However, this study does not confirm the findings of many other studies where the gender factor predicts increasing depression scores, especially in studies conducted with the general population (Kamin, Berzelak, & Ule, 2012; Van de Velde, Bracke, & Levecque, 2010; Van de Velde, Huijts, Bracke, & Bambra, 2013). The present study suggests that the gender gap for depression needs a thorough review and analysis in more details of macrosocial conditions. These contextual factors may have a substantial impact on deeper understanding of the gender gap in depression, especially in countries where major social and cultural transitions are taking place, and particularly when the socio-economic position of women is in transformation, as in Kosovo.

Competing Interests
The corresponding author of the submitted paper is one of the peer reviewers of the journal for several years now, but did not intervene in any form in the peer review process of this article.

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