Research report

The point prevalence of depression and associated sociodemographic correlates in the general population of Latvia

E. Rancans [a,*], J. Vrublevska [a,1], S. Snikere [b,2], I. Koroleva [b,3], M. Trapencieris [b,4]

[a] Department of Psychiatry and Narcology, Riga Stradins University, Tvaika street 2, LV-1005, Riga, Latvia
[b] Philosophy and Sociology Institute, University of Latvia, Akademijas laukums 1, LV-1027, Riga, Latvia

A B S T R A C T

Aim: To determine the point prevalence of depression in the general Latvian population and to explore the associated sociodemographic characteristics.
Methods: The study was part of the cross-sectional survey on the general population on substance use in Latvia in 2011. It consisted of face-to-face interviews of a randomised stratified multi-stage probability sample. In total, 4493 persons were included, aged between 15 and 64. To assess depression, the participants were interviewed using the Patient Health Questionnaire-9; a score of ≥ 10 was defined as indicating the presence of a depressive episode. Socio-demographic, subjective health status and alcohol use were assessed using the structured interviews. Logistic regression models were applied to analyze data.
Results: The point prevalence of depression was 6.7%. The odds of having depression were higher in females, in urban dwellers (though not in the capital city, Riga), in persons with non-Latvian ethnicity, with alcohol dependence, with poor subjective health status and having a dissatisfaction with life. Limitations. Cross-sectional nature of the sampling and the symptom scale used for the assessment of depression.
Conclusions: The point prevalence of depression in Latvia is within the European average. Certain socio-demographic and health related factors are associated with higher risk of morbidity with depression.

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1. Introduction

In community epidemiological surveys, mood disorders are the second most prevalent class of mental disorders after anxiety disorders (Kessler et al., 2009). Depression, is one of the most disabling diseases, and is associated with severe impairment of physical, social and role functioning, resulting in reduced quality of life (Wittchen et al., 2011) and therefore needs to be a priority of health systems worldwide (Moussavi et al., 2007).

A number of prevalence studies conducted in European Union countries show that depression affects one in twenty adults at least for a few weeks in any given 12 months period (Paykel et al., 2005). Despite the availability of a rich epidemiological data from Western Europe there is a pressing need for prevalence studies from Eastern European countries where incomes are much lower, there are

significant social and alcohol problems and where failures in health care systems are common (Paykel et al., 2005). Previous studies indicate the point prevalence of depressive symptoms in the general populations of Eastern Europe countries range from 6.55% to 8.15%, with the highest mean scores in Hungary, Ukraine and the Russian Federation (Van de Velde et al., 2010). Studies on prevalence of depressive symptoms in Russia, Czech Republic and Poland show strong associations between depression and effort-reward imbalance at work, material deprivation, unmarried status and binge drinking (Pikhart et al., 2004; Bobak et al., 2006).

Clinical depression is usually identified more often in women than in men, with gender ratio of 2:1 (Fryers et al., 2004), and in people with a less privileged social position (Fryers et al. 2003). Usually the frequency of depression increases in adolescence, then peaks in middle age (a critical period for education, career establishment and economic productivity), and falls off in old age (Jorm, 1987; Patten et al., 2006). However some studies show the prevalence of depression increases with age, with the highest rates being observed in the oldest age group (Kolchakova and Akabaliev, 2003; Nicolosi et al., 2011). Depression has also been reported to be more prevalent unmarried people and those living alone (Russell and Taylor, 2009), and is associated with poverty (Patten et al., 2006), lack of education (Ansseau et al., 2008), unemployment (Hämäläinen et al., 2005) as well with general medical comorbidity (Goldberg, 2010).

* Corresponding author. Tel.: +371 67080131.
E-mail addresses: erancans@latnet.lv (E. Rancans),
vrublevskaja@inbox.lv (J. Vrublevska), sigita@petijums.lv (S. Snikere),
ilzek@petijums.lv (I. Koroleva), marcis@petijums.lv (M. Trapencieris).
[1] Tel.: +371 67080131.
[2] Tel.: +371 26811698.
[3] Tel.: +371 29642299.
[4] Tel.: +371 22000423.

No population-based studies of the prevalence of depression and associated risk factors have been conducted in Latvia up to now. Therefore it is not known whether the Latvian data are comparable with that from other countries. An estimation of the prevalence of depression and possible sociodemographic risk factors in the general population could contribute to improvement of the recognition and treatment of depression in Latvia.

2. Methods

The data are from a general population survey on substance use in Latvia in 2011 (Snikere et al., 2012). Latvia is one of the Baltic States with a population with 2.07 million people, of which 1.53 million are aged between15–64. A stratified sample of households was randomly chosen from the Address Register maintained by the State Land Service. The stratification variables were: level of urbanization, development index of the municipality, and region. A total of 56 strata were formed. The person with the nearest birthday was chosen as the respondent within the selected household and was invited to participate in the survey. The questionnaire consisted of a face-to-face interview (questions on sociodemographics, alcohol, tobacco, depression, attitudes towards alcohol and drug policies), and self-completion part (questions about drug use and violence). Specially trained interviewers were involved in data collection; training of interviewers addressed the importance of the wording of the questions for the two scales used in the survey. To evaluate how representative the sample was, the survey included a small questionnaire for non-responders comprising several sociodemographic questions (gender, age, education, ethnicity), smoking habits, alcohol drinking frequency and questions about cannabis use over lifetime and in the previous 12 months.

The survey instrument was available both in Latvian and Russian languages. According to the Latvian legislation, this type of survey does not require special approval from Biomedical ethic committees. However authors performed this survey according to the Code of Professional Practices of Latvian Association of Sociologists, and consent of participants was obtained.

2.1. Measures

Sociodemographic, self-rated health status, alcohol use measures, and data about depression were evaluated from the structured face-to-face interviews. Self-rated health status was assessed by the question: *How do you evaluate your health status in general?* and *How do you rate your health status compared with a last year?* The answers were classified into 3 categories: *better than average, average, lower than average.* Satisfaction with life was measured by the question: *Evaluating all aspects of life, to what extent are you satisfied with your life?* The responses were divided into 3 groups: *satisfied, somewhat satisfied, not satisfied.*

Monthly income for each member of the household during the previous year was classified per capita into one of the four following quartiles: < 91 Latvian Lats (LVL), 91–129 LVL, 130–209 LVL and 210 LVL and above (corresponding to < 129 EUR, 129–184 EUR, 185–295 EUR, ≥ 296 EUR).

To assess depression, participants were interviewed using the 9-item depression module of the Patient Health Questionnaire (PHQ), which covers the nine symptom-based *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV) criteria for major depression and can also produce dimensional symptom severity ratings. The questionnaire assesses a 2-week period, essentially assessing the current rather than past episodes (Patten, 2008). Previous studies indicate PHQ-9 has a good sensitivity and specificity to detect major depression (Spitzer et al., 1999; Gilbody et al., 2007), is superior to other screening instruments and also shows better characteristics in comparison with other scales (e.g. HADS and WHO5) (Löwe et al., 2004 a, b). The PHQ-9 has been widely used across different medical settings and also in the general population with good sensitivity and specificity (Gilbody et al., 2007; Kroenke et al., 2010; Kocalevent et al., 2013). Thus, the PHQ-9 appears to be a reliable and valid instrument with comparable internal consistency between clinical and epidemiological samples (Rief et al., 2004; Martin et al., 2006). The presence of depression was defined using the cut-off score of ≥ 10 in the PHQ-9 as recommended by Kroenke et al. (2001), because a score in the range of 10–27 reflects a moderate to high severity of depressive symptoms. The majority in diagnostic meta-analyses of the PHQ-9, used a cut-off point ≥ 10, with a range of sensitivities between 80–90% (Kroenke et al., 2010). The PHQ-9 was translated to both Latvian and Russian and back-translated into English and checked for accuracy. Both translated versions were discussed in two focus groups, one for each language, and were piloted in a small survey to detect presence depressive symptoms in primary care in Latvia.

Missing values of PHQ-9 scale variables were replaced using imputation by chained equations (Royston, 2009) with gender, age, education, marital status, household income per capita and urbanization as predictors.

A Composite International Diagnostic Interview (CIDI) was used for assessing alcohol dependence as defined in the DSM-IV (Robins et al., 1988). Three of seven diagnostic criteria needed to be fulfilled to achieve the definition/diagnosis of alcohol dependence. The CIDI alcohol dependence scale was also translated into Latvian and Russian and back-translated into English and checked for accuracy.

In our survey the PHQ-9 and alcohol dependence scale showed high internal consistency. For PHQ-9, the Cronbach's alpha was 0.86 for the Latvian version and 0.87 for the Russian version. The principal component analysis of alcohol dependence scale identified one factor for alcohol dependence and Cronbach's alpha was 0.90 for the Latvian version and 0.87 for the Russian version.

2.2. Statistical analysis

Prevalence estimates were calculated for the total sample, age subgroups, and sociodemographic characteristics. Descriptive statistics, uncorrected Pearson chi-square and logistic regression models were applied to the data. Model 1 was adjusted only by gender and age, Model 2 was adjusted by all simultaneous factors. All results are reported as odds ratios (OR) with 95% confidence interval (CI). Data analyses were carried out with Stata 12 for Windows (Stata Corp) taking complex sampling design into account; standard errors were calculated using Taylor series linearization.

3. Results

The survey response rate was 61% and it was calculated according to the standards of the American Association of Public Opinion Research (American Association for Public Opinion Research 2013). There were no statistically significant differences in the basic sociodemographic characteristics between survey respondents and non-respondents.

The final weighted sample included 4493 persons (2173 males, 2320 females). Survey context on substance use caused oversampling of the 15–24 year old sub-group, thus causing unequal selection probabilities, which was addressed by data weighting procedures.