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Research report

The epidemiology of major depressive disorder and subthreshold depression in Izmir, Turkey: Prevalence, socioeconomic differences, impairment and help-seeking

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ABSTRACT

Background: Subclinical and clinical depression is common, widely distributed in the general population, and usually associated with role impairment and help-seeking. Reliable information at the population level is needed to estimate the disease burden of depression and associated care needs in Turkey.
Method: The cross-sectional study aimed to assess the prevalence of subthreshold (SubD) and clinical major depressive disorder (MDD) in Izmir, Turkey. In the 5242 eligible households, a total of 4011 individuals were successfully interviewed, yielding a response rate of 76.5%. Prevalence estimates of MDD and SubD depression were formed by using the responses to the questions of the CIDI section E. Short Form 36 (SF-36) to assess health status and functional impairments in eight scaled scores during the last four weeks. All respondents were questioned about receiving 12-month treatment for any psychological complaints, the route of help-seeking, as well as prescribed medicines and any hospitalization.
Results: The one year prevalence estimate for CIDI/DSM IV MDD was 8.2% (95% CI, 7.4–9.1). Less educated, low income, uninsured, low SES, unemployed/disabled and housewives, slum area residents had higher one year MDD prevalence. Determined prevalence of help seeking from mental health services of SubD and MDD cases were 23.6%, 30.6% respectively. Only 24.8% of clinically depressive patients received minimally adequate treatment.
Limitations: Cross sectional design.
Conclusion: Higher MDD prevalence correlates with younger ages, female gender, unemployment, less education, lower monthly income, lower SES and uninsurance. Help seeking from mental health services were low. There are treatment gap and impairment in depressive group.

1. Introduction

Depressive disorders are among the main causes of disease-related disability worldwide (Murray et al., 2012; Vos et al., 2012). As well as clinical depression, subthreshold depression (SubD) is common, widely distributed in the general population, and associated with role impairment and help-seeking at all age groups (Ayuso-Mateos et al., 2010; Wesselhoeft et al., 2013). Although SubD has been defined in a wide range of forms, varying on the number of symptoms and duration required, generally it refers to conditions where number and/or duration of symptoms are below the levels of diagnostic categories (Baumeister and Morar, 2008; Karsten et al., 2010; Rodriguez et al., 2012). In recent years, numerous cross-sectional studies provided prevalence estimates of major depressive disorder (MDD) and SubD in different countries with rates indicating a wide variability (Ayuso-Mateos et al., 2010; Bromet et al., 2011; Rai et al., 2013; Rodriguez et al., 2012). Despite global efforts to report prevalence estimates from different countries (Kessler et al., 2008), there is still relative lack of studies from low- and middle-income countries (Rai et al., 2013). Furthermore countries and populations are not homogenous in the distribution of depressive symptomatology (Rai et al., 2013). Cultural differences, as well as contextual factors including urban

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residency, area level social disadvantage may be associated with increased risk of depressive disorder (Drukker et al., 2007; Kim, 2008; Mair et al., 2008; Peen et al., 2010). In addition to comparable rates of depressive disorders at country-level, estimate figures are being reported for the urban areas in which huge crowds are resident and vulnerable to mental disorders (Binbay et al., 2011; Viana et al., 2009).

Located in the south-eastern Europe, Turkey is one of the most populous countries in the region with diverse social burdens ranging from rapid urbanisation to relative high rates of unemployment particularly in urban areas and among young people. The population of Turkey increases annually by more than one million (TurkStat, 2014). Only in two decades, almost a quarter of the population migrated from rural areas to cities and in the last decade ten new cities joined to over one million populated urban areas in Turkey. In 2014, 78.2% of the population lived in urban areas, provincial capitals and districts (TurkStat, 2014). Izmir is Turkey's third largest province, with over four million residents. The wider Izmir area is also one of the most urbanised areas in the country, as 91% of the province's population lives in city centres (TurkStat, 2014). In addition, the metropolitan area of Izmir has the second highest population density (321 people per square kilometre) which reaches to 1000 people per square kilometre.

The annual census (TurkStat, 2014) showed that the province of Izmir has the fourth largest population growth in Turkey, and this is caused by migration. Only between 2007 and 2008, there were 27.2 thousand migrants (State Planning Organization, 2008). Hence, 5.1% of all migrants of Turkey migrated to Izmir in this period (State Planning Organization, 2008). The main reasons for migration to Izmir within the period of 1995 to 2000 were the migration of the index individual from the household, and employment expectation. Most migrants were aged between 20 and 24 years. Izmir attracts migrants not only from its neighbouring area but from countrywide scale (State Planning Organization, 2008). The Izmir neighbourhoods provide a fertile ground to study distribution of mental disorders.

Reliable estimates of mental disorders at the population level are needed to estimate the disease burden and associated care needs of urban population of Turkey (Binbay et al., 2014). The Mental Health Profile of Turkey, which reported its results in 1998, still remains the only general population study that has been conducted in a nationally representative multistage sample of households (Kılıç, 1998). This study provided prevalence estimates of psychiatric disorders in all age groups that were also suitable for international comparisons, and was one of the first collaborations with international institutions such as the World Health Organization (Kılıç, 1998). The 12-month prevalence estimates of any mood disorder (depression, dysthymia, and/or mania) and MDD were 4.2% and 3.5% respectively with higher estimates in females, urban areas and with a treatment gap of 62.6% (Andrade et al., 2003; ICPE, 2000; Kılıç, 1998; Kohn et al., 2004). Lifetime prevalence estimates of any mood disorder and MDD were 7.3% and 6.3% which were relatively low rates compared to results of similar studies (Andrade et al., 2003; ICPE, 2000; Kılıç, 1998). Despite several epidemiological studies carried out in small communities, or selected age groups in urban areas (Basoglu et al., 2004; Demir et al., 2011; Elbi et al., 2002; Kirpinar et al., 2010; Yaka et al., 2014), there has been no new study similar in scope to the Mental Health Profile of Turkey (Binbay et al., 2014). Furthermore none of the psychiatric epidemiological studies provided comparable rates, and comprehensive information about severity and disability.

With respect to Turkey, the 2004 estimates of the Burden of Disease Study suggest that unipolar depressive disorder accounts for 3.9% of all disability-adjusted life years (DALYs) (5.4% in women and 2.6% in men) and constitutes the fourth common cause of disability in the adult population with a lifetime prevalence estimate of 21.1% (Sağlık Bakanlığı, 2006). Despite the relevance of unipolar depression as a highly prevalent and burdensome condition, there is no study about its subthreshold forms that do not meet current classificatory thresholds, rate of depression related treatment seeking, and pattern of treatment received in Turkey. The current report aims extending previous Turkish epidemiological data on prevalence and severity of DSM-IV major depressive disorder with providing prevalence estimate of subthreshold depressive states and as well as the use of services in order to provide further insights and implications on mental health services in a highly urbanized area.

2. Methods

The TürkSch study (*Izmir Mental Health Survey for Gene-Environment Interaction in Psychoses*) is a prospective-longitudinal study consisting of several data collection stages to screen and follow up mental health outcomes in a general population sample. The study aimed to assess the prevalence of mental health problems with a special focus on psychotic outcomes in the city of Izmir, Turkey (stage 1, cross-sectional), socioeconomic deprivation and social capital of neighbourhoods in a separate sample (stage 2, cross-sectional). A nested case-control study (stage 3) recruited individuals with psychotic outcomes and healthy controls from stage 1, and included blood sampling for gene-environment interaction and clinical reappraisal as well. Six years after the data collection of stage 1, a cohort study (stage 4, prospective) has been set to assess the mental health outcomes and environmental exposures of the sample of the first stage. The present paper uses data collected in stage 1. The TürkSch-study has been described in more detail in previous papers (Binbay et al., 2012a, 2012c, 2011).

2.1. Participants

The TürkSch study was approved by the Ege University ethics committee and subjects provided written informed consent. The Turkish Institute of Statistics (TurkStat) randomly selected 6000 households from the Izmir population using a multistage sampling procedure stratified by urbanicity in four categories including rural areas in the wider Izmir metropolitan area. Addresses were contacted between November 2007 and October 2008. After providing informed consent, one household member aged between 15 and 64 years and available to complete the interview was randomly selected using the Kish within-household sampling method (Kish, 1949). Out of 6000 addresses, 5242 households were eligible for interview in stage 1. A total of 4011 individuals were successfully interviewed, yielding a response rate of 76.5%. Response was higher in older age groups and in females. More details have been described elsewhere (Binbay et al., 2012a, 2012b).

2.2. Screening and diagnostic instrument

In order to assess mental health, screening and diagnoses were based on the relevant sections of the Composite International Diagnostic Interview (CIDI) 2.1 (Andrews and Peters, 1998). The CIDI is a fully structured interview developed by the World Health Organization (WHO) (Robins et al., 1988) and has been used in various surveys around the world including Turkey (Alptekin et al., 2009; Deveci et al., 2007; Kılıç, 1998). CIDI-based screening of symptoms provides diagnoses in accordance with the definitions and criteria of the International Classification of Diseases, Tenth Revision (ICD-10), and the Diagnostic and Statistical Manual of Mental Disorders (Fourth Edition) (DSM-IV). Previous research reported acceptable-to-good concordance between the CIDI