Cultural differences in the development and characteristics of depression

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Depression is a highly prevalent mental illness with increasing burden for the patients, their families and society as well. In spite of its increasing importance, we still do not have complete understanding either of the phenomenology or the etiopathological background of depression, and cross-country, cross-ethnic and cross-cultural differences in the prevalence and symptomatic manifestation of depression further obscure this picture. Culturally-related features of depressive illness are gaining more importance in clinical practice with the increasing migration trends worldwide. In spite of the differences replicated in multiple studies, no exhaustive explanations are offered so far. In the present paper we describe the most consistently replicated findings concerning the most important cross-national differences in the rates and characteristics of depression with a short comment on possible background factors.


**Keywords**: depression, cross-country, cross-cultural, cross-ethnic, prevalence

In spite of the fact that depression is a ubiquitous disease affecting every country, ethnicity and culture worldwide, and depression rates fall in a fairly conservative range across countries, there are remarkable, important, and as yet unexplained differences both in the prevalence and manifestation profile of depression. In current clinical practice two western-developed classification systems are used, the DSM-IV and the ICD-10, therefore diagnoses as well as diagnostic instruments may strongly be biased towards describing and reflecting the European and North-American cultural context of psychiatric disorders (Halbreich et al., 2007). However, already in the 1970s it has been supposed that culturally-based different understanding of body and soul contributes to differences in manifestations of psychopathology (Halbreich et al., 2007). Furthermore, these culturally-based differences in the manifestation of depressive symptoms may be not only due to sociocultural differences, but also underlying genetic factors resulting from evolutionary and geographical isolation of different ethnocultural groups, and which genetic differences themselves may also manifest in cultural differences (Chiao and Blizinsky, 2010).

In the present paper we look at cross-country differences in the characteristics and manifestations of depression with some reflection on its possible background factors.

**ISSUES RELATED TO MEASUREMENT AND METHODOLOGY**

There are several possible bias factors affecting the accuracy of cross-cultural comparisons when using the same instrument, including construct bias referring to the case when the construct in question, such as depression is not identical across groups due to its definition or the different associated symptoms; and item bias referring to the possible low familiarity of the given item in certain cultures, or when the given item in a given culture is associated with nuisances or negative connotations (Van de Velde et al., 2010). Due to category fallacy, cross-cultural application of DSM-IV criteria may lead to misleading results, and use of the same diagnostic schedule may identify different severity levels in different language or cultural groups (Simon et al., 2002) making it difficult to differentiate true differences in depression or...
symptom prevalence from artefacts due to the applied methodology.

**CROSS-COUNTRY COMPARISONS OF PREVALENCE OF MAJOR DEPRESSION**

Depression is one of the most common mental health disorders in western societies presenting an increasing burden everywhere and while there are cross-culturally uniform characteristics of its epidemiology, there are important differences in prevalence rates showing characteristic patterns (Van de Velde et al., 2010; Weissman et al., 1996).

One study on population-based samples including 38000 subjects in 10 countries located in Southern and Western Europe, North and Middle America, Near and Far East, and New Zealand observed notable differences in the lifetime prevalence of unipolar major depression ranging from 1.5/100 in Taiwan to 19.0/100 in Beirut (Weissman et al., 1996). Similar prevalence differences were reported among primary care patients in another study investigating data from 25916 patients in 14 countries in the longitudinal WHO Psychological Problems in General Health Care (PPGHC) study, where a 15-fold variation in unipolar major depression prevalence was observed, and low prevalence (2.2%) including Nagasaki and Shanghai, medium prevalence (9.7%) including Ibadan, Verona, Berlin, Seattle, Athens, Bangalore, Mainz, Ankara, Paris, Groningen, Manchester; and high prevalence centres were established (21.6%) including Rio de Janeiro and Santiago (Simon et al., 2002).

What is even more remarkable, such great prevalence differences are present not only in countries with greatly different cultural characteristics and ethnic makeup, but also within Europe. In a recent study in 25 European countries employing the 8 item CES-D scale, overall depression rates appeared to cluster by region, with highest scores observed for Central and Eastern-European countries (Ukraine, Hungary, Russia) and lowest scores for Western- and Northern-European countries (Norway, Denmark, Switzerland). Women scored higher in all countries except for Ireland and Finland; and former Soviet and Southern European countries as well as Poland showed high gender differences (Van de Velde et al., 2010). Similarly, the first results of the EURODEP study in an elderly population indicated great prevalence differences in depression across Europe, from 8.8% in Iceland to 23.6% in Munich (Copeland et al., 1999), and a metaanalysis of the EURODEP data from 13808 subjects in 9 centres indicated 5 high scoring (Amsterdam, Berlin, Munich, London, Verona) and 4 low scoring centres (Dublin, Iceland, Liverpool, Zaragoza) with symptoms levels significantly varying between the centres (Copeland et al., 2004). The above results indicate significant prevalence differences even between culturally closely related European countries.

**CROSS-COUNTRY, CROSS-CULTURAL AND CROSS-ETHNIC COMPARISONS OF SYMPTOM PROFILES OF MAJOR DEPRESSION**

The above studies also indicate that there are not only differences in prevalence rates of depressive disorders within countries, but prevalence of individual depressive symptoms also differs giving rise to cross-nationally, ethnically and culturally different depressive symptom profiles. In a study in ten countries from several continents major depression showed differential symptom profiles, but certain countries seemed to cluster. Symptoms present in most subjects at all sites (including the US, Canada, Puerto Rico, France, Lebanon, Taiwan, Korea, New Zealand) included loss of energy, insomnia, concentration difficulties and thoughts of death (Weissman et al., 1996), while weight loss, increased appetite, hypersomnia, retardation, agitation and decrease in sexual interest did not reach 60% in any locations. Same or very similar profiles was observed in US, France, and New Zealand, similar profiles in Taiwan and Korea and the most distinct in Lebanon (Weissman et al., 1996).

Several smaller studies comparing individual scale items among different ethnic populations also reported important differences. In one study half of CES-D items were found to show differences between different ethnicities including 2 items related to depressed affect, 3 to somatic symptoms and 1 to interpersonal relations (Iwata et al., 2002), and in another study also using CES-D in Caucasian Americans, African Americans, US-born Hispanics, and non US-born Hispanics half of the scale items were found to function differently in case of non-Hispanic white people, while US and non-US-born Hispanics didn’t greatly differ, and African-Americans tended to favour somatic symptoms over affective symptoms (Iwata et al., 2002). In one study, of the 20 items of CES-D only 4 were found to function similarly in the three ethnic groups indicating that different ethnicities do not report depressive symptoms equivalently (Kim et al., 2009).

Studies indicate that the profile of depression shows remarkable differences even in case of Euro-
There is also a difference in the temporal pattern of (Bernert et al., 2009). Being sad or feeling empty was reported without between-country variations (95.3%-97.6%), sleep disturbances ranged between 85.4%-90.7% (data for Netherlands and France, respectively), cognitive disturbances between 76.4% in Germany to 87.9% in the Netherlands. The lowest rates yet largest between-country differences were found in case of psychomotor symptoms, with ranges from 39.0% in Germany to 55.7% in Spain, and similarly low rates and large differences were observable for suicidal ideations and thoughts ranging from 58.4% in Italy to 69.6% for France (Bernert et al., 2009). In the Euro-D study a significant and consistent variation of symptoms of probable depression was found among countries not explained by age, gender, education and cognitive function with a higher prevalence of all symptoms in Latin ethno-lingual countries which was especially marked in symptoms related to motivation (Castro-Costa et al., 2007). Studies using the Hamilton Depression Rating Scale (HDRS) found significant variability of symptomatological structure of depression even within one nation (Berrios and Bulbena-Villarasa, 1990).

Investigating cultural-ethnic differences in the trajectories of depressive symptoms also revealed differences in the temporal appearance of depressive symptoms, with Hispanics and African Americans experiencing higher symptom levels during early adulthood compared to Caucasians which becomes equivalent by middle age (Walsemann et al., 2009). There is also a difference in the temporal pattern of symptoms within depressive illness, in Americans depressed mood appears initially while psychomotor retardation or agitation, guilt and worthlessness feelings and concentration difficulty only when depression becomes more severe, in Koreans, however, concentration difficulty and low energy appear as early symptoms and guilt and worthlessness feelings, thoughts of death and psychomotor retardation or agitation only when the illness takes a more severe course (Chang et al., 2008).

There are some areas where the most consistent cross-cultural and cross-country differences were reported, including somatisation of symptoms, feelings of guilt, expression of negative affects, and suicidality.

**Somatisation**

In many cultures pain and distress may function to communicate dysphoric states and depression (Draguns and Tanaka-Matsumi, 2003). It has been assumed that especially people with a traditional cultural background may deny psychological distress or interpret it as a somatic illness especially in medical settings, however, evidence now indicates that in both traditional and western societies somatic symptoms show a strong association with psychological stress (Karasz, 2005). Still, somatisation carries different weight in different cultures, and decades of research results indicate that people living in non-western countries report more somatic and less affective symptoms of depression (Chen et al., 2003; Mezzich and Raab, 1980; Katon et al., 1982b; Katon et al., 1982a; Waza et al., 1999; Parker et al., 2001), and apart from the eastern-western dichotomy somatic complaints show a similar excess in Mediterranean and Latin samples (Gada, 1982; Ierodiakonou and Iacovides, 1987; Marmanidis et al., 1994). Prominence of somatic complaints has most consistently been reported in China, Japan, India, Latin America and Africa while these symptomatic manifestations are more neglected in Europe and North America which nourish dualistic traditions separating body and psyche (Draguns and Tanaka-Matsumi, 2003). In a study on female patients representing 4 continents (Halbreich et al., 2007), somatic complaints including pain, sleep disturbance and fatigue were present and interpreted as depression in the majority of non-Western countries (India, Brazil, Peru, Venezuela, Morocco, Tunisia), in Chile, however, no somatic complaints were observed (Halbreich et al., 2007). In the study by Van de Velde et al., applying the 8-item CES-D in 25 European countries somatic complaints were found to carry more weight in Central and Eastern European countries as well as in Austrian and Cypriot males, and being less important compared to mood symptoms in Northern European countries (Van de Velde et al., 2010).

Some epidemiological studies, however, do not support differences in the cross-cultural level of somatization although this may be in part due to divergent definition of somatisation in different studies (Simon et al., 1999). Since somatic symptoms of depression are also prevalent in Western countries, the traditional concept of somatisation being the non-Western manifestation of depressive syndromes has been challenged (Deisenhammer et al., 2012) emphasising that somatisation seems to be ubiquitous.
in spite of earlier reports of its predominance in some countries (Kirmayer, 2001). However, in spite of some inconsistencies, variation in the level of somatisation is the most consistently replicated finding concerning cross-cultural studies of depression (Thakker and Ward, 1998) and it has been hypothesised that high rates of somatisation in non-Western countries may result from disapproval or social unacceptability of expressions of emotions and especially negative emotions (Thakker and Ward, 1998).

**Expression of positive affects**

Sociocultural factors seem to influence style of emotional expression (Iwata and Buka, 2002) and several cross-country depression studies using the CES-D indicated that Japanese and some other Asian ethnic groups such as Koreans displayed significantly lower level of positive affects and consequently higher depression scores although their negative symptom score did not differ compared to non-Eastern subjects (Iwata and Buka, 2002; Iwata et al., 1995; Cho and Kim, 1998; Noh et al., 1998). These results were interpreted as reflecting either that Japanese are less likely to experience positive affect or that expression of positive affect may be inhibited in Japan and enhanced in North America (Iwata and Buka, 2002), this latter probably due to the collectivist nature of Japanese society which puts the interest of the group above that of the individual (Iwata and Buka, 2002). Others explained this finding as being possibly due to cultural characteristics related to modesty and self-effacement (Lee et al., 2011). In addition to far eastern cultures, reluctance to answer positive on positive affect items were described in Hispanic populations and native Americans as well (Iwata et al., 2002; Kim et al., 2009).

**Feelings of guilt**

As already suggested by Kraepelin (Stompe et al., 2001), feelings of guilt were found to be the source of significant cultural variation with guilt feelings less prominent within subjective symptoms of depression in Africa, India, Indonesia, Japan and China, while frequent in depressive patients in Europe and North America. In the study by Weissman et al. comparing depression prevalence and symptoms across countries, feelings of guilt were reported everywhere except for Puerto Rico and Taiwan (Weissman et al., 1996), and, similarly, no guilt feelings within the framework of depression were found in Eastern cultures or Africa in various studies (Stompe et al., 2001). Feelings of guilt as a symptom of depression are conceptualized differently and are triggered by different cue stimuli in Europe and Asia and Africa (Draguns and Tanaka-Matsumi, 2003). The higher prevalence of guilt feelings in Western societies was explained as possibly due to being socialised in a culture bearing Judaic-Christian faith, which was also supported by studies indicating a decrease in guilt feelings in the past 100 years possibly as a result of declining importance of religion even in Western societies (Stompe et al., 2001; Murphy et al., 1964). Feelings of guilt, however, are also frequent in Islamic countries and also in some far Eastern Asian cultures as Vietnam (Stompe et al., 2001).

**Suicidality**

One study in 21 countries using data from the World Mental Health Surveys found that about half of the people seriously considering suicide had prior mental disorders both in developed and developing countries (51.8% vs. 42.9% respectively), there was, however a difference concerning what mental disorders are associated with suicidality; while in developed countries bipolar disorder, depression and PTSD were most associated with suicide attempts (OR 3.5, 3.2 and 3.0 respectively), in developing countries the strongest predictor was PTSD, conduct disorder and drug abuse/dependence (OR 5.6, 4.8, 4.0 respectively) (Nock et al., 2009).

Suicidal ideation as a symptom of depression was reported to be higher in Northern European countries indicating the cultural context dependence of consideration of suicide (Bernal et al., 2007; Nuevo et al., 2009), while a study by Bernert et al. (Bernert et al., 2009), cited above, also reported a significant variability of frequency of suicidal ideation in six European countries.

**POSSIBLE FACTORS IN THE BACKGROUND OF CROSS-CULTURAL AND CROSS-ETHNIC DIFFERENCES IN THE PREVALENCE AND MANIFESTATION OF DEPRESSION**

Although we are increasingly exploring the cross-cultural differences in the prevalence and symptom profile of depressive disorders, we have very limited understanding of the reasons behind them, with only hypothetical explanations put forward so far, including ethnic differences in vulnerability to depression, community level differences in exposure to traumatic events and stressors including socioeconomic dep-
rivation, rapid cultural changes, political repression, or violence threats (Simon et al., 2002; Weissman et al., 1996). Such inter- and intra-individual characteristics as social support and locus of control, culturally different conceptual models of depression as well as labelling for depression-related experiences have also been reported to be related to cross-national depression prevalence differences (Steptoe and Wardle, 2001; Steptoe et al., 2007; Kirmayer, 2001; Karasz, 2005).

Religion, acting both on an intra-individual and inter-individual or group level has also been associated with depression prevalence in multiple studies (Braam et al., 1997; Idler and Kasl, 1992; Koenig et al., 1988; Levin, 1994; Braam et al., 2010; Koenig et al., 1995; Dull and Sokan, 1995).

In addition to the above socioeconomical and cultural phenomena, our expanding knowledge concerning ethnic differences in relevant biological and genetic factors (Lahn and Ebenstein, 2009; Moskvina et al., 2010) also supported by pharmacogenetic studies suggest that these may also contribute to different depression prevalences and manifestation profiles; while others argue that observed differences in depression rates are possibly more likely to be artefacts resulting from problems of definition and measurement (Simon et al., 2002).

**CONCLUSION**

Depression is the result of a complex interplay between genetic, biological, psychological and social factors (Kuehner, 2003). Culturally divergent depressive symptoms can be conceptualised as developing on partially distinct genetic and biological factors, further accentuated by prevailing sociocultural trends, possibly contributing to significantly different cross-cultural and cross-ethnic prevalence rates and manifestation profiles of depression.

Due to these genetically and socio-culturally-based differences in the presentation of depression it has been suggested that a more culture-sensitive nosology is needed than what is offered by DSM-IV currently, reflecting the western conceptions of psychiatric illnesses (Thakker and Ward, 1998). Paying attention to culture, gender and age should be essential during the definition of mental illnesses (Halbreich et al., 2007) especially that it is well known that psychopathology is influenced by experience and is determined by the environment and the individual patient’s social and cultural context, and cultural environment may also shape the biology of the population (Halbreich et al., 2007). Further studies targeting the phenomenology and etiopathology of depression from multiple angles are needed to identify whether there are real cultural differences in prevalence and manifestation, and in turn, these study results will provide deeper understanding and insight to the factors playing a role in the evolution of depressive disorder.

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Kulturális különbségek a depresszió kialakulásában és jellegzetességeiben

A depresszió igen gyakori mentális betegség, ami egyre növekvő terhet jelent a páciensek, családjuk, valamint a társadalom számára egyaránt. Ennek ellenére továbbra sem ismerjük teljességében sem a depresszió fenomenológiáját, sem etiopatológiai hátterét, és a képet tovább árnyalják a depresszió prevalenciájában, illetve szimptomatikus megnyilvánulásában tapasztalható országok, etnikumok és kultúrák közötti különbségek. A depresszió kultúrával összefüggő jellegzetességei a világszerte egyre fokozódó migrációs tendenciák következtében a klinikai gyakorlat szempontjából is egyre nagyobb szerepet játszanak. A számos vizsgálatban leírt és replikált különbségek ellenére eddig nem áll rendelkezésre kielégítő magyarázat ezek okaival és háttérétől kapcsolatban. Jelen cikkünkben bemutatjuk a széleskörben feltárt országok közötti különbségeket a depresszió jellegzetességeivel és gyakoriságával kapcsolatban és röviden áttekintjük az ezek háttérében álló lehetséges tényezőket.

**Kulcsszavak:** depresszió, prevalencia, kultúrközi különbségek, országok közti különbségek, etnikumok közti különbségek