BRIEF REPORT

Somatic and cognitive domains of depression in an underserved region of Ecuador: some cultural considerations

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Not enough research efforts on depression have been carried out up to now in Latin America. The knowledge that has resulted from research activities in the United States or Europe offers limited generalizability to other regions of the world, including Latin America. In the Andean highlands of Ecuador, we found very high rates of moderate and severe depressive symptoms, a finding that must be interpreted within its cultural context. Somatic manifestations of depression predominated over cognitive manifestations, and higher education level was protective against depression. These findings call for an appreciation of culturally-specific manifestations of depression and the social factors that influence them. These factors must be further studied in order to give them the deserved priority, allocate resources appropriately, and formulate innovative psychosocial interventions.

Key words: Depression, Latin America, cultural factors, somatization

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Although depression has been studied in numerous countries around the world (1-3), the majority of research efforts in this area have been conducted in the Western world, particularly in the United States (4,5). According to the 2007 World Health Organization Report, the contribution of psychiatric and neurological conditions to the burden of illness in Latin America more than doubled between 1990 and 2002, from an estimated 8.8% of disability-adjusted life years (DALYs) in 1990 to 22.2% in 2002 (6).

Despite its Iberian cultural influence, you clearly see in Latin America the presence of a new "identity". In this context, many psychiatric disorders tend to be expressed differently than is usually perceived in the Western world. For instance, in Latin America it is frequently observed that depression is manifested somatically through symptoms such as headaches, gastrointestinal disturbances, or complaints of "nervios" (meaning "nerves" in Spanish), rather than psychological symptoms such as sadness or guilt (7). Along those lines, clinical data suggests that women suffering from depression have a higher prevalence of somatic manifestations than men (8-10).

We carried out a study in an underserved region of the Andean highlands of Ecuador, aiming to better understand the somatic and cognitive domains of self-reported depressive symptoms, and to identify gender differences in these symptoms.

The Spanish version of the Beck Depression Inventory II (BDI-II, 11), a 21-item self-reported scale of depressive symptoms which has been validated in numerous Latin American countries, was administered to 167 patients (71 males and 96 females) in 7 small parishes along the southern Andes of the Zamora-Chinchipe province of Ecuador. A group of psychologists from the United States, Central and South America, and the Caribbean conducted multiple rounds of translation and back translation in order to reduce cultural bias (12). Institutional review board approval was obtained from the New York University School of Medicine to conduct this study.

Subjects were recruited from mobile medical clinics run by volunteer physicians and nurses. Literate individuals completed the self-report questionnaire on their own, while illiterate individuals had the questions read to them by a native Spanish speaker staff who worked at the clinic.

Nine subjects did not answer more than 20% of the BDI-II questions and, therefore, were excluded from the final analysis. The remaining subjects' ages ranged from 15 to 76 years, with an overall group mean of 33.8 ± 13.1 years.

Twenty-five percent of subjects had none or minimal depression (BDI-II <14) and 15% of subjects had mild depression (BDI-II 14-19). The remaining 60% of subjects had BDI-II scores that qualified them to have either moderate depression (28%) or severe depression (32%). Crying (55%) and past failure (41%) were reported by the greatest number of depressed respondents. Women self-reported higher levels of sleep disturbance ($t=2.77$, $df=146$, $p=0.006$) and fatigue ($t=2.09$, $df=154$, $p=0.038$) than men. Females exhibited more depressive symptoms and somatic symptoms than males, but the difference was not significant ($t=1.67$, $df=156$, $p=0.098$ and $t=1.98$, $df=154$, $p=0.058$, respectively). The mean item score on the somatic items was significantly higher than the mean item score on the cognitive items (1.25 ± 0.63 versus 0.78 ± 0.56, $t=12.42$, $df=148$, $p=0.001$).

On a logistic regression analysis, education level proved to be the only significant predictor of BDI-II depression. Additionally, a higher education level was associated with decreased symptom severity.

The Ecuadorian perspective of depression and mental illness must be taken into account to ensure a culturally-appropriate interpretation of our results. The Saraguro Indians of Ecuador identify a culturally-relevant psychiatric illness they term "nervios", which produces symptoms very similar to those seen in depression in the Western world (13). "Nervios" is a powerful idiom of distress used by Hispanics/Latinos from a variety of Caribbean, Central and South American countries to express concerns about physical distress, emotional states, and life changes (14). "Nervios" is not necessarily pathological but is seen as a natural consequence of the human condition.

The Saraguro Indians recognize that "nervios" exists on a spectrum. The symptoms of the illness have the potential to be so severe as to be pathological or even fatal in some individuals (15). Such cases may be characterized by an extreme lack of concern for personal hygiene, by significant disturbances of appetite or sleep, or by severe anhedonia. Those cases that involve suicidal thinking or non-epileptic seizure activity are recognized to be the most serious manifestations of "nervios" and are, therefore, considered to be pathological.

The high prevalence of self-reported depressive symptoms in our study may be partly attributable to the Saraguro's acceptance of "nervios" as a normal, non-pathological response to everyday stressors, thereby legitimatizing the experience and rendering it free of the stigma associated with mental illness (16,17). There is no incentive to medicalize the symptoms of "nervios" in this part of the world, where mental health services are virtually non-existent, antidepressants are available only at a hospital hundreds of miles away and occasionally at mobile medical clinics, and the primary mental health provider is a priest responsible for the care of several hundreds of people in the nearby provinces.

The differing gender manifestations found in our study may be reflective of different coping styles between males and females, with men often resorting to alcohol use as a means of warding off the more overt symptoms of "nervios" seen in women. In the Western world, where a cognitive and/or affective presentation of depression is the norm, beliefs about the tendency to somatize typically apply to historically disadvantaged groups, such as women and ethnic/racial minorities. Since cultural norms are socially constructed, we wonder if rather than asking why Latinos somatize, we can instead ask why Westerners "psychologize", or express distress in cognitive or affective terms (18).

Education is commonly seen as a proxy for socioeconomic status and has been shown to positively influence employment, work, earnings, and income (19). However, occupational grade, another common proxy for socioeconomic status, was not protective against depressive symptoms in our study. Education and occupation may be related in a different manner in the Ecuadorian population than in the population of industrialized nations. One explanation for these findings is that, unlike one's occupation, which produces external benefits like monetary profits and tangible achievements, the benefits of education (personal empowerment) are only internal (20). Moreover, in close-knit rural communal societies, high socioeconomic status comes at a price. In the Ecuadorian highlands, for instance, individuals in more prestigious and profitable professions are susceptible to greater effects of "nervios", due to the responsibilities placed on them by their community-oriented family and society (21). Those with certain occupations may even have an added incentive to purposefully exhibit symptoms of "nervios" as a means of having their responsibilities absolved temporarily.

In our study, no significant relationship was identified between age and depressive symptoms. The Saraguro Indians believe that everyone, regardless of age and gender, is susceptible to experiencing "nervios". Exceptions to the rule are children who are intentionally shielded from stressors of adult life, such as social expectations and work responsibilities, and are thus presumed not to experience "nervios". In the Ecuadorian community, increased age is associated with perceived greater wisdom and life experience; subsequently, elders in this community are treated with the greatest respect and esteem by all community members. As such, the emotional losses that the Ecuadorian elderly experience with increased age appear to be compensated by the commensurate increase of social self-worth, secondary to having a higher status within the community.

Although our study adds to the cross-cultural understanding of depressive symptoms, prospective studies are needed to elucidate causal relationships between these symptoms and psychosocial factors, as well as to enhance cross-cultural understanding of depression. Additional research efforts are needed to cross-culturally validate existing measures, as well as to validate the nature of the disorders themselves. In resource-poor settings with minimal mental health care access, an appreciation of culturally-specific manifestations of depression and the social factors that influence them is also needed, in order to improve advocacy efforts, ensure better detection of depression in the public at large, formulate innovative psychosocial interventions, and secure the allocation of resources commensurate with mental health needs.

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