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Original Research

Relationships between depression, pain and sleep quality with doctor visits among community-based adults in north-west China

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ABSTRACT

Objectives: Previous studies have suggested that the high rates of unmet need for mental health services in China among depressed people are related to a cultural tendency to deny mental and emotional symptoms and instead express them somatically. Such somatization may lead a sufferer to a consultation with a healthcare professional but rarely leads to appropriate mental health treatment. This study aimed to elucidate the relationships of depression, sleep quality and perceived physical pain with doctor visits among community-based adults in China, and thus to help guide the development of clinical practices aimed at reducing unmet mental health service need.

Study design: Cross-sectional study.

Methods: In total, 7602 north-west Chinese adults aged >40 years were included in the survey. The Center for Epidemiologic Studies Depression Scale—Chinese Edition was used to assess depressive symptoms. Subjective sleep quality was evaluated using the Pittsburgh Sleep Quality Index. The Brief Pain Inventory—Chinese Version was used to measure pain severity and pain interference.

Results: In this study, 16.2% of people reported physical pain, and 20.0% of those who reported poor sleep quality had seen a doctor in the past month. Only 14.4% of those with depression had seen a doctor. The results of the logistic regression analyses indicated that subjects with pain were significantly more likely to have seen a doctor than subjects without pain (odds ratio [OR] 1.61; 95% confidence interval [CI] 1.32–1.97). Poor sleep quality was significantly associated with doctor visits (OR 1.76, 95% CI 1.40–2.21). Depression was not associated with doctor visits after adjusting for pain, sleep quality and potentially confounding factors.

Conclusion: When attempting to screen for depression and risk of depression in middle-aged and older adults in China, mental health professionals should focus on perceived physical pain and poor sleep quality.

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Introduction

Psychiatric morbidity is an important cause of disability and is associated with the use of health services and costs to the community.[1] However, fewer than 6% of those suffering from depression, substance abuse or other mental health problems seek therapy in China.[2] Moreover, many studies have indicated that Chinese people tend to deny depression or express it somatically,[3,4] being inclined to express their emotional feelings in terms of body parts.[5] This somatic expression of depression leads patients with mood disorders to seek help from primary healthcare professionals rather than mental health professionals. Thus, research examining the relationship between depression and the use of general healthcare services is needed to help public health workers and policy makers to understand the barriers to the use of mental health services and identification of depression.

Physical pain is a major reason for seeking health care, accounting for hundreds of billions of dollars in healthcare costs worldwide.[6] People with depression often present with a complex set of overlapping symptoms, including medically unexplained physical pain that may be linked to emotional issues.[7] The severity of depressive symptoms is associated with the frequency of pain complaints.[8] Theoretical models of help-seeking behaviour suggest that individuals progress through several stages before seeking mental health treatment. These stages include experiencing symptoms, evaluating the severity and consequences of the symptoms, assessing whether treatment is required, assessing the feasibility of and options for treatment and deciding whether to seek treatment.[9] Pain may be a reason for people with depression to seek health services. However, few studies have examined the relationships of depression and pain with health service utilization at the community level.

Prior studies have shown there are complex correlations between depression, pain and poor sleep quality. Poor sleep quality is a common and key symptom among depressives and is commonly reported by patients with chronic pain.[10] In addition, previous surveys have reported that between 5% and 36% of those with poor sleep quality have consulted a physician specifically for sleep problems, whereas 27–55% have discussed sleep problems in the course of a medical consultation for another problem.[11] Given that poor sleep quality is an important reason for seeking health care, and the complex correlations of these three variables, it is crucial to gather more information on, and examine the use of health services by, people with depression, pain and poor sleep quality in comparison with the general population.

The aim of this study was to examine the relationship of doctor visits with depression, sleep quality and pain in China. The research findings will have important implications for identifying how to reduce unmet need for mental health services.

Methods

Study design

This was a cross-sectional study. The data used in this study were derived from the Chinese Urban Social Protection Survey, which was conducted in July and August 2011 by China's Provincial Civil Affairs Sector and Beijing Normal University's School of Social Development and Public Policy. Recruitment and data collection were completed during that period.

Three-stage cluster sampling was used to select households for the survey in one rural town and three cities in north-west China (Pingliang town, Lanzhou city and Baiyin city in Gansu province and Xining city in Qinghai province). In the first two stages, districts and communities were selected according to their population sizes using systematic sampling with probability proportional to size. In the final stage, the sampling unit size was set at 100 households; the final number of households included in the sample was determined based on the number of sampling units in each community. Thus, using simple random sampling, the final sample included between 100 and 300 households from each selected community. In each household, one representative aged ≥16 years, who was familiar with the familial situation, was responsible for the household survey. All contacted eligible family members provided information about their sociodemographic characteristics and medical service utilization and received psychological assessments. In total, 6622 households and 7602 respondents from 38 communities throughout the three areas participated, yielding a response rate of 89%. For 2104 of the households, more than one adult member per household responded to the survey. Among the 7602 subjects, 1918 reported that they had been affected by pain in the 24 h before the interview.

Non-responders may be a potential source of statistical bias. As only 11% of those approached did not respond to this survey, this type of bias was considered to be a minor factor in this study.

Measures

Main outcome measures

Doctor visits were assessed using one item: 'During the last month, have you seen a doctor in an outpatient clinic?'. The response options for this question were: 1 ('no') and 2 ('yes').

Measures of the main independent variables

Depressive symptoms. The Center for Epidemiologic Studies Depression Scale (CES-D)—Chinese Edition[12] was used to assess depressive symptoms. This is the most widely used depression screening scale and is frequently used in community-based studies. The CES-D—Chinese Edition has shown good reliability and validity across all ages in urban populations.[13] The internal consistency coefficient (Cronbach's alpha) of the whole scale in the present study was 0.90.

Radloff suggested that a score of 16 should be the cut-off point for depression on this scale,[14] but some studies have adopted 21 or 22 as the cut-off score.[15] Studies in China have suggested that the original cut-off score of 16 has a low positive predictive value[16] and may be too low for use in Chinese populations.[13] Other studies have indicated that a cut-off score of 21 has better positive predictive value for depression among the Chinese population.[17] Studies of patients in primary care settings with higher levels of comorbid medical diseases have suggested that a cut-off score of 21 has the best positive predictive value for major depression.[18] In this study, 21 was used as the cut-off score to indicate probable depression.