

Physical Symptoms of Depression: Unmet Needs in Special Populations

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Over two thirds of people suffering from depression complain of pain with or without reporting psychological symptoms. Many people have trouble expressing internal emotions, consider mental illness to be a stigma, or simply assume depressive symptoms relate to their personal situations and therefore do not seek treatment. Physical symptoms are more prevalent among women, the elderly, the poor, children, culturally diverse populations, the medically ill, and the imprisoned. Because of a dual mechanism of action, medications such as duloxetine and venlafaxine may be useful in treating the physical symptoms as well as depressive symptoms in these special populations.

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Depression is one of the leading disorders worldwide. In 1997, unipolar depression was ranked as the fourth leading cause of disability in the world by the World Health Organization (WHO) and was predicted to become second only to ischemic heart disease by 2020.¹ However, many suffering from depression are not diagnosed and consequently do not receive the treatment they need. In many, depression is masked by physical disorders and, when seen by primary care physicians, a diagnosis of depression is not given. Physical symptoms can be a distinct sign of depression, but depression is often overlooked in the differential diagnosis of patients who present frequently with vague complaints of pain (e.g., headache, backache, stomach pain, and muscle aches) for several reasons.²

In today's society, some people suffer from what appear to be what some call "fashionable" diseases.³ Unexplained physical symptoms are attributed to chronic fatigue syndrome, fibromyalgia, multiple chemical sensitivity, yeast syndrome, and hypoglycemia. Some of these people, though, suffer from depression. Such patients, who complain of various physical symptoms, usually have difficulty acknowledging personal feelings and dealing with conflict in their lives. Instead they may develop fixations

with food, dietary supplements, rest, and alternative therapies to deal with these unexplained maladies.

For others, the link between depression and physical symptoms may be cultural. Unlike physical symptoms, depression may be regarded as shameful, or the physical maladies associated with depression may have cultural significance. For example, in Japan the word *hara*, meaning abdomen, is used in various cultural references and literature to express emotion. Abdominal pain is also one of the most common physical symptoms among depressed Japanese patients.⁴

Clinicians need to be attuned to unexplained physical complaints of all patients, but particularly in women, the elderly, the poor, children, certain cultures, the medically ill, and the imprisoned. These groups pose a challenge to clinicians because their physical complaints may mask the true problem, depression.

SPECIAL POPULATIONS

Women

Women experience depression at twice the rate of men,⁵ and physical symptoms also appear to be higher among women than men.⁶ Using data from 8098 people, aged 15–54 years, in the National Comorbidity Study, Silverstein⁶ observed a small difference between the rates of men and women suffering from pure depression, but found that the rate of women with physical symptoms associated with depression was almost twice that of men. Physical symptoms were defined as sleep disturbances, fatigue, or appetite disturbances. After 6 months, 7.6% of women displayed physical symptoms, whereas only 3.6% of men indicated physical symptoms with depression. The sex difference among those with pure depression was small—3.0% were women and 2.3% were men.

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The rate of depression was also found to be higher among female chronic pain sufferers.⁷ Sixty-three patients seen consecutively who completed all standard intake materials at a Washington pain clinic were studied. The average age of the patients was 45.2 years and the average length of time for the persistence of symptoms was 7.1 years. In this study, 48% of patients reported back pain, 22% pain of the face or head, 19% knee and hip pain, 17% neck and shoulder pain, and 17% other types of pain. It was noticed that physical findings were insufficient to explain many patients' pain and disability. The results of this study found that 49% of the patients met DSM-III criteria for major depression, and those women suffering from depression experienced higher pain levels than nondepressed women and depressed and nondepressed men.

In general, a diagnosis of depression should be considered for patients who present with chronic physical pain, and in whom pain does not lessen with appropriate treatment.

Elderly

Depression in the elderly is often viewed as an inevitable consequence of the physical, social, and economic problems accompanying aging.⁸ It is estimated that only 10% of the elderly population that need mental health care get it.⁸ Although DSM-IV criteria for major depression include depressed mood and loss of interest, physicians, when looking for depression in the elderly, tend to focus solely on depressed mood, which may be less obvious among the elderly than loss of interest.⁹ Elderly depressed patients may not seek treatment for their depression because the stigma of mental illness is perhaps more severe among the elderly or they merely consider their depression a normal result of old age and declining physical health.

One study¹⁰ observed 1286 patients aged 65 or older for 4 years to determine the rate of physical decline among elderly patients treated for depression. Data for the study were collected as part of the Established Populations for the Epidemiologic Studies of the Elderly. Depressive symptoms were determined using the 11-item Center for Epidemiological Studies Depression Scale (CES-D). Patients were required to undergo a variety of tests to determine the level of their physical function. At the end of 4 years, patients with high scores for depression on CES-D showed a statistically significant decrease in physical function compared to those with low depression scores.

Poor

The poor are one of the most underserved groups. The ability to reach and treat the needs of this population may be limited for mental health care professionals. Due to their economic and social disadvantage, poor people may express depression through physical symptoms because of lack of knowledge, to avoid stigma, or to qualify for treatment in insurance plans that do not cover mental

health problems. It is also not uncommon for depression to be overlooked or unthought of among poverty level groups.

Some studies, though, have shown that depression among lower socioeconomic groups is prevalent. In one long-term study,¹¹ 593 men and women from a small community in Canada were followed for 16 years. Depression and anxiety were studied in relation to social status and change in social status over the course of time. The prevalence of depression at the beginning of the study was 10.7% for men and 13.5% for women in the lower economic group. Lower rates of depression were seen among the upper (0.0% of men and 3.6% of women) and middle (4.3% of men and 4.5% of women) class. At the end of the study, the rates of depression had changed slightly, but lower class groups still displayed a higher level of depression (9.6% for men and 12.7% for women vs. 0.9% for men and 0.0% for women among the upper class). Another study¹² observed primary care patients from socioeconomically deprived groups for the prevalence of depression. A total of 18,414 patients aged 16–94 years in 55 primary care practices were surveyed for depression. Among these patients, 66.1% were women, 24.9% retired, 4.1% unemployed, 3.1% permanently unable to work, and 3.0% temporarily unable to work. Depression was significantly higher among the unemployed (15.2%), permanently unable to work (23.2%), and temporarily unable to work (18.7%) groups.

These studies^{5,11} show depression is more common among the lower than upper socioeconomic classes, but research is needed on the association of physical pain with depression in these patients.

Children and Adolescents

Vague physical symptoms in children or adolescents may be symptoms of depression, as many youth have low awareness of their emotions and have trouble verbally expressing their feelings. Physical symptoms unrelated to disease or drug use may be an indicator of depression in youth.

In a study of children and adolescents referred for emotional and behavioral disorders,¹³ 162 patients aged 8 to 18 years were studied for depression with physical symptoms. When children were assessed with the Diagnostic Interview for Children and Adolescents-Revised, 69.2% had at least 1 physical symptom that impaired functioning. Headaches were the most frequent physical symptom, affecting 50.6% of the group, but stomach and abdominal pains, tremors, dizziness, and blurred vision were also common. Patients diagnosed with depression suffered from headaches more frequently—57.8%. In children, unlike in adults, gender did not prove to be a significant factor in the prevalence of depression or physical symptoms.

In a recent study¹⁴ of adolescent outpatients (mean age = 13.8 years), parents rated their offspring on the

Child Behavior Checklist, and patients completed the Youth Self-Report. Not surprisingly, anxious and depressive symptoms were higher in the group diagnosed with anxiety/depression while physical complaints (mean score = 6.8) were higher among adolescents diagnosed with somatoform disorders. However, youth suffering from depression also exhibited many physical symptoms (mean score = 4.9).

Depression should be considered in children and adolescents with somatic symptoms that are not clearly due to physical illness. Children and adolescents tend to express emotional problems through physical symptoms and should also be assessed for depression in the presence of unexplained physical symptoms or if treatment for physical symptoms fails.

Culturally Diverse Groups

Different cultures express feelings of pain and depression in different ways. Although technological advances and population migration will mitigate cultural differences, currently differences among cultures do exist when it comes to depression and feelings about depression. Among many cultures, depression is seen as a weakness. In these cultures, physical symptoms may mask symptoms of depression.

A worldwide study¹⁵ of physical symptoms of depression was conducted among 1146 patients meeting DSM-IV criteria for depression. A consecutive or random sample of patients visiting primary care clinics in Turkey, Greece, India, Germany, the Netherlands, Nigeria, United Kingdom, Japan, France, Brazil, Chile, and the United States were screened using the 12-item General Health Questionnaire (GHQ). Patients who ranked in the 80th percentile on the GHQ were then evaluated using the primary care version of the Composite International Diagnostic Interview. Patients were separated into 3 categories: patients meeting criteria for depressive disorder but complaining only of somatic symptoms, those with depression accompanied by at least 3 unexplained somatic symptoms, and those with depression who denied any somatic symptoms. Among these patients, 85% met at least 1 of the 3 categories of somatized depression, while only 4% met all 3. The range of depressed patients in various countries who reported only physical symptoms was 45% to 95%, which indicates a reluctance among patients to discuss or acknowledge depression. In Greece, Germany, Nigeria, and Japan, patients had the highest rates of denial of psychological symptoms.

The prevalence and type of physical symptoms may also be linked to the patient's culture. One study⁴ compared physical symptoms among newly diagnosed depressed primary care patients in Japan (N = 104) and America (N = 85). Japanese patients reported more total physical symptoms, and a higher percentage (27%) had physical symptoms, compared with American patients

(9%). Abdominal pain, headache, and neck pain were most common among Japanese patients.

Another study¹⁶ researched depression among Russian-Jewish immigrants to the United States. Over a 1-month period, 47 patients who had either been scheduled to see a bilingual primary care physician or were walk-ins were evaluated with the Hamilton Rating Scale for Depression (HAM-D) and the Beck Depression Inventory. Most patients had been in the United States under 6 years and were currently unemployed. Clinical depression was diagnosed in 25 patients, and 88% of these patients had been diagnosed by an internist, suggesting that their complaints had been of the physical nature.

Depression with physical symptoms may also be the result of the circumstances leading to the decision to leave the country of origin, the stress of the immigration experience itself, or the new environment. Language and cultural barriers may also impede the expression of emotional problems such as depression. Depression should be considered in differential diagnosis of immigrant patients with difficult-to-diagnose somatic symptoms, including pain.

Medically Ill

Patients who are medically ill or suffering from a terminal disease are likely to suffer from depression. However, diagnosing major depression can be difficult due to the assumption that depressive symptoms are natural in chronically or seriously ill patients. Physical symptoms that seriously depressed or terminally ill patients experience are often associated with the disease, which may further confuse the diagnosis of depression. Despite this, physical symptoms may be an indicator of depression among the medically ill.

One study,¹⁷ in which 130 terminally ill patients were interviewed, demonstrated the difficulty in diagnosing depression in these patients. Patients were classified as meeting a low-severity or high-severity threshold for depression according to Research Diagnostic Criteria (RDC) and Endicott's revised criteria. The rate of high-severity depression (13%) was equal with both diagnostic criteria. Low-severity depression was found to be significantly more frequent using either diagnostic criteria: 26.1% for RDC and 23.1% for Endicott criteria, but when physical symptoms were excluded, the rate of depression diagnoses decreased. Diagnosing depression by strictly using a high-severity threshold or by excluding physical symptoms is not recommended due to the risk of underdiagnosing depression among hard-to-recognize depressed patients who are physically ill.

Another study¹⁸ measured the rate of depression among HIV- and AIDS-infected patients. Eight hundred eighty-one patients over the age of 18 were interviewed concerning depression, physical function, days spent in bed, and suicidal thoughts. Depression was measured using the RAND depression screener, which has combined items

from the CES-D and the Diagnostic Interview Schedule. Depression was found in 42.3%, while 57.3% of patients reported low physical functioning. Suicidal thoughts were found among 16.6% of patients, and 55.3% spent several days in bed.

Although many terminally ill patients may have some symptoms of depression, major clinical depression may also exist. Terminally ill patients whose physical pain and time spent in bed are unusual may suffer from depression as well and should not be denied effective treatment.

Prison Populations

Depression is prevalent and often underdiagnosed among prison populations. One study¹⁹ found that only 46.4% of inmates with depression received treatment. A study of 138 incarcerated female adolescents²⁰ found a high prevalence of physical symptoms and a steady positive correlation between physical symptoms and depression. The researchers concluded that these findings highlighted the need for integration of physical and mental health services in juvenile correctional facilities. Clinicians treating prison populations need to evaluate inmates who complain of pain for other indicators of depression.

TREATMENT

While antidepressants have been shown to be effective in treating depression, not all antidepressants are equally effective in alleviating physical symptoms. Tricyclic antidepressants (TCAs) have long been known to be effective, but side effects may be difficult to tolerate. Selective serotonin reuptake inhibitors have been, in general, less effective than TCAs for treating physical complaints. Two antidepressants that appear to be better suited to treating depressed patients with physical symptoms are duloxetine and venlafaxine, both dual serotonin-norepinephrine reuptake inhibitors (SNRIs) that decrease chronic pain in animal models.

In one study,²¹ duloxetine and placebo were administered to 245 patients who met DSM-IV criteria for major depression. In a randomized, double-blind, parallel-group, placebo-controlled design, patients were administered 60 mg/day of duloxetine or placebo for 9 weeks. Results were measured by the HAM-D 17-item scale, and the Visual Analog Scales for Pain and Patient Global Impressions-Improvement Scale were used as secondary outcome measures. Duloxetine-treated patients demonstrated significant reductions on the HAM-D for general somatic symptoms when compared with those on placebo. Significant improvement was also seen among duloxetine-treated patients for overall pain, back pain, shoulder pain, interference with daily activities, and amount of time in pain while awake.

Studies^{22,23} also suggest that venlafaxine may be useful in treating depressed patients suffering from chronic pain

and painful disorders such as fibromyalgia. A randomized double-blind study²⁴ of 93 patients who met DSM-III-R criteria for depression was conducted for either placebo or venlafaxine, 375 mg/day, for 28 days. Significantly more patients (52%) on venlafaxine treatment compared with placebo treatment showed significant improvement according to the HAM-D scale, after 4 weeks.

CONCLUSION

With depression as one of the leading causes of disability worldwide, physicians need to pay close attention to all patients, but particularly to members of special groups that may suffer from depression. Some of the disability associated with depression may be related to physical symptoms. Patients who are either uncomfortable with the perceived stigma of depression or unable to express emotions will often manifest physical rather than psychological symptoms.

Vague or excessive pain and physical symptoms that are not adequately explained by physical or diagnostic findings or that do not respond to treatment may be an indication of depression. Promising new data indicate that the SNRIs are dual-action antidepressants that may offer needed help in alleviating depression with symptoms of physical pain.

Drug name: venlafaxine (Effexor).

Disclosure of off-label usage: The author of this article has determined that, to the best of her knowledge, duloxetine is not approved for use in the United States.

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