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Relationships between adult emotional states and indicators of health care utilization: Findings from the National Health Interview Survey 2006–2014[☆,☆☆]

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ABSTRACT

Objective: Adults with serious psychological distress have a high likelihood of mental health problems severe enough to cause serious impairment in social and occupational functioning requiring treatment. These adults visit doctors frequently yet have poor health compared to adults without serious psychological distress. This study examined associations between emotional states of serious psychological distress in relationship to healthcare utilization indicators. A guiding hypothesis was that somatization underlying emotional states contributes to excessive healthcare seeking among adults with serious psychological distress.

Methods: Using 2006–2014 National Health Interview Survey, in adults with serious psychological distress ($n = 9271$), the six states: unable to make efforts, nervousness, hopelessness, sadness, worthlessness and restlessness were assessed in multivariate models in relation to four healthcare utilization indicators: change in the usual place of healthcare, change due to insurance, having seen a healthcare provider in the last 6 months and having 10 or more doctor visits in the last 12 months. Models were adjusted for sociodemographic variables, having seen a mental health provider, and health conditions.

Results: Adults feeling unable to make efforts were more likely to seek healthcare in the last 6 months and at least ten times in the last twelve months. Adults feeling hopeless were less likely to be heavy healthcare utilizers.

Conclusions: Predisposing medical conditions do not fully explain healthcare utilization in adults with serious psychological distress. Educating healthcare providers about the emotional states motivating healthcare seeking, and integrating mental healthcare into primary care, may improve the health of adults with serious psychological distress.

1. Introduction

Prior research has demonstrated that adults with serious psychological distress (SPD) tend to exhibit poorer patterns of healthcare utilization. They are more likely to report having at least 10 or more doctor visits in a 12 month time period, and were more likely to have seen a healthcare provider in the last 6 months compared to adults without SPD [1]. Additionally, compared to adults without SPD, adults with SPD were less likely to have health coverage, have greater use of expensive outpatient primary care physician (PCP) visits, yet have worse health outcomes compared to adults without SPD [2] [3] [4]. In a study using data from the Center for Disease Control and Prevention (CDC) National Health Interview Survey (NHIS) 2001–2004, adults with SPD were more likely to have a history of stroke [1]. In a more recent study using pooled data from the 2009–2013 NHIS, adults with SPD were more likely to have COPD, heart disease and diabetes than adults without SPD [4]. More than one quarter of adults over the age of 65 with SPD had limitations in ADLs, and lost an average of 17.9 years of potential life [4] [5].

The frequency of doctor visits combined with poor health outcomes merits exploration. Decisions to seek healthcare in adults with SPD may be shaped by SPD itself. Adults with SPD may struggle to detect changes in their health and have diminished judgement about whether perceived changes are related to a medical condition and warrant seeing a doctor [6]. Life stress has also been shown to impact healthcare

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seeking behaviors [7]. Chronic stress associated with SPD may reduce tolerance for ambiguous health symptoms [7].

SPD in adult patients may also overwhelm healthcare providers when pursuing a medical exam and diagnosis. Studies have cautioned physicians against failing to identify medical illness in mentally ill individuals who seek care for psychosomatic reasons [8]. Adults with SPD may not be able to provide an accurate medical history to their provider; a situation further exacerbated by frequently changing the place of healthcare [1] [9]. Compounding the process of self- and provider-assessment in the mentally ill is the additional challenge of adherence to care in the mentally ill. SPD is associated with treatment non-adherence, missed appointments, poor response to treatment, and reduced likelihood of seeking preventive care or engaging in healthy lifestyles [1] [10].

It is possible that the emotional states associated with SPD may motivate health care utilization beyond any present medical conditions. We hypothesize that somatization may contribute to excessive healthcare seeking among adults with SPD, yet limit their ability to get the actual care they need for both physical and mental health. Currently Somatic Symptom Disorder (SSD) is defined by somatic symptoms that are either very distressing or result in significant disruption of functioning as well as excessive and disproportionate thoughts feeling or behaviors regarding these symptoms (DSM-IV) [11]. Under the DSM-IV definition, somatization does not have to relate to medically unexplained symptoms and may or may not be associated with another condition. This definition of somatization represents an accumulation of challenges and revisions from earlier definitions that viewed somatization as the tendency to experience psychological distress in the form of somatic symptoms and to seek medical help for these symptoms, which may be initiated and/or perpetuated by emotional responses such as anxiety and depression [11].Somatization has been recognized as a common problem, especially in primary health care settings, that contributes to frequent use of medical services [12].

We hypothesize that after taking into account existing medical conditions, and hence, a motivation to see a healthcare provider due to medical conditions, emotional states related to SPD will be associated with healthcare utilization. Thus, we postulate that the emotional states from SPD may be psychosomatic in the context of seeking medical care, motivating us to understand whether health care seeking is driven in part by emotional states, independent of medical conditions, and whether the emotional component of healthcare seeking contributes to inappropriate medical care, and poorer health outcomes in adults with SPD compared to adults without SPD. Our report is both timely and relevant given the recently documented increases in psychological distress observed among US adults [13].

While earlier reports have documented patterns of healthcare utilization among adults with SPD [1] [4], our study makes the novel contribution of assessing healthcare utilization across the six respondent self-reported emotional states comprising SPD: feeling unable to make efforts, nervousness, sadness, hopelessness, worthlessness and restlessness in relation to four indicators of healthcare usage: changing the usual place of healthcare, changing the usual place of healthcare due to insurance, having seen a healthcare provider in the last six months, and having had >10 or more doctor or other healthcare provider visits in the last 12 months.

2. Methods

2.1. Data source

Data from the 2006–2014 NHIS were used to select an analytic sample of adults with SPD. The NHIS collects information through home-based interviews conducted for the National Center for Health Statistics (NCHS). NHIS yields estimates representative of the civilian non-institutionalized US population [14] [15]. We combined NHIS responses across the 2006–2014 survey years to ensure adequate sample sizes and provide greater statistical power [16]. We also pooled data to account for changes in health care utilization associated with implementation of the Patient Portable and Affordable Care Act (ACA).

2.2. Serious psychological distress

The NHIS uses the Kessler K6 score to identify persons with a high likelihood of having a diagnosable mental illness severe enough to cause moderate to serious impairment in social, occupational, or school functioning requiring treatment [17] [18]. However, the K6 is not diagnostic for any one mental health condition. The K6 asks about the frequency of each of six symptoms, as follows:

During the PAST 30 DAYS, how often did you feel...
1. So sad that nothing could cheer you up;
2. Nervous;
3. Restless or fidgety;
4. Hopeless;
5. That everything was an effort; and
6. Worthless.

The following options are given for describing frequency:
1. ALL of the time;
2. MOST of the time;
3. SOME of the time;
4. A LITTLE of the time; and
5. NONE of the time.

“None of the time” is given a score of 0, “all of the time” a score of 4 and the total possible score ranges from 0 to 24. We reversed the scoring so that a larger number indicated a greater likelihood of SPD. A score of 13 or above on the K6 was used to indicate SPD and has been validated in other studies [17] [18]. The prevalence rates presented here were described as 30-day prevalence rates because the reference period for the symptom questions is the “past 30 days”.

2.3. Emotional states

Emotional states were measured by six dichotomous indicators based on responses to each of the K6 items: unable to make efforts nervousness, sadness, restlessness, hopeless and worthlessness. We found that most respondents reported a frequency of “Most of the time” or “All of the time”. The percentage that felt these emotional states “Most of the time” or “All of the time” were as follows: feeling unable to make efforts (36.7% and 35.4%, respectively), nervousness (36.8% and 30.5%), sadness (38.4% and 21.0%), restlessness (36.5% and 33.5%), hopeless (21.9% and 21.9%) and worthlessness (25.8% and 20.9%). We therefore selected a cut point of “All of the time” or “Most of the time” vs. “Some of the time” or less frequently. Using these frequency categories allows us to be more confident that the respondent was having the feeling before and after the survey date. When a respondent reported that he/she experienced the emotional state “All of the time” or “Most of the time” we labelled that positive response as “1”; negative responses were coded as “0”.

2.4. Healthcare utilization

The healthcare utilization indicators included: change the place to which you usually go for healthcare (change in place), change the place to which you usually go for healthcare for a reason related to healthcare (change in place due to insurance), visiting a doctor or healthcare provider 10 times or more times in the last 12 months (visit a doctor 10 times), having seen or talked to a healthcare professional about your own health in the last six months (having seen a doctor in 6 months), and having seen a mental health provider in the last 12 months (having seen a mental healthcare provider) was defined by answering “yes” to those questions. The questions are documented at the NHIS website: