

Healthcare Access among Adults with Frequent Mental Distress

Khalid Salim, Khaleel Hussaini, PhD

Abstract

Background: Mental health has a complex relationship to other aspects of health. Multiple risk factors such as physical illness, low socioeconomic status and unemployment have been established in medical literature as corollaries to mental distress. This study aims to determine if a decreased access to healthcare is positively correlated with the presence of frequent mental distress (FMD) amongst individuals.

Methods: The data analyzed comes from the Behavior Risk Factor Surveillance System (BRFSS), a CDC pioneered survey conducted in across the U.S. that contains more than 400,000 adults 18 and older.

Results: In concordance with the hypothesis, individuals who were unable to obtain medical care due to cost as well as individuals who had not had a routine medical checkup in the last 2 years were correlated with the presence of FMD. The other tested variable was the absence of health insurance, which did not correlate with FMD, contrary to the hypothesis.

Conclusions: The study demonstrated that certain aspects of personal health, including the tested variables in this study, correlate positively with mental distress. Future studies should aim to identify additional variables and attempt to identify causality between testable variables and FMD.

Introduction

Mental health is an issue that is becoming more and more prominent in national discussion and media. The purpose of this study is to explore whether access to healthcare is correlated with frequent mental distress. The CDC defines Frequent Mental Distress (FMD) as "having 14 or more mentally unhealthy days as measured by the CDC Healthy Days question", with the question being "Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?". The 14 day period is used because clinically, similar markers are used for the diagnosis of depression or anxiety disorders.

Research Question: Is there a correlation between access to healthcare and the presence of frequent mental distress (FMD) individuals?

Methods

The BRFSS is a CDC pioneered survey conducted across the U.S. that contains more than 400,000 adults 18 and older, making it the largest survey in the world. We utilized publicly available data from 2014 with a total sample (n) of 491,773.

Our primary outcome variable of interest was frequent mental distress (FMD). Respondents are asked, "Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?" Our independent measures were: lack of health insurance, medical cost, and routine check-up.

We estimated prevalence rates with corresponding 95% confidence intervals (CI) for selected covariates and then performed bivariate analyses for our hypothesized predictors: lack of health insurance, medical cost, routine medical check-up using Rao-Scott chi-square test to account for complex survey design and utilized $p < 0.01$ for significance due to large sample size. After assessing bivariate relationship we estimated crude odds ratios (COR) with 95% CI using logistic regressions that accounted for the complex survey design. All analysis was performed using SAS 9.4 (SAS Institute, Inc., Cary, NC).

Table and Figures

Variables	Crude OR (95% CI)	Final Model Adjusted OR (95% CI)
Predictors		
No health insurance	1.6 (1.5-1.7)	0.8 (0.7-0.9)
Medical cost	3.4 (3.3-3.5)	2.1 (2-2.1)
Routine check-up more than two years ago	1.3 (1.2-1.3)	1.1 (1.1-1.2)
Confounders		
Current smoker	2.6 (2.5-2.8)	1.5 (1.4-1.6)
Binge drinking	1.2 (1.1-1.2)	1.2 (1.1-1.3)
Overweight or Obese (BMI ≥ 30)	1.1 (1.1-1.2)	1 (0.9-1)
Asthma	2 (2-2.1)	1.2 (1.1-1.3)
Diabetes	1.6 (1.5-1.7)	1.2 (1.1-1.3)
Coronary heart disease	1.8 (1.7-2)	1.4 (1.3-1.5)
Depressive disorder	8.3 (7.8-8.9)	6.3 (6-6.9)

Table 1: Crude (COR) and Adjusted Odds ratios for U.S. Adults 18 and older reporting frequent mental distress

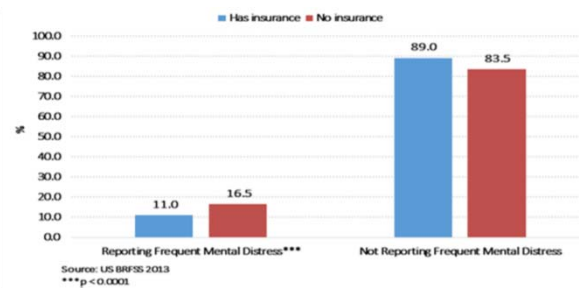


Figure 1: Percent of adults in the U.S. reporting frequent mental distress with and without insurance

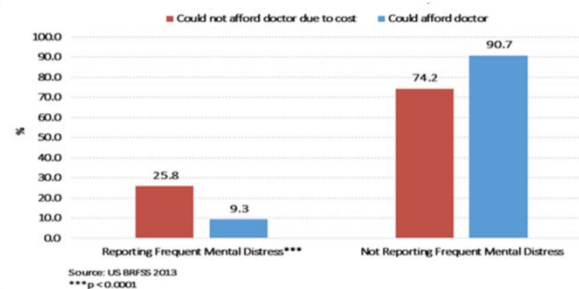


Figure 2: Percent of adults in the U.S. reporting frequent mental distress who could and could not see a doctor due to cost

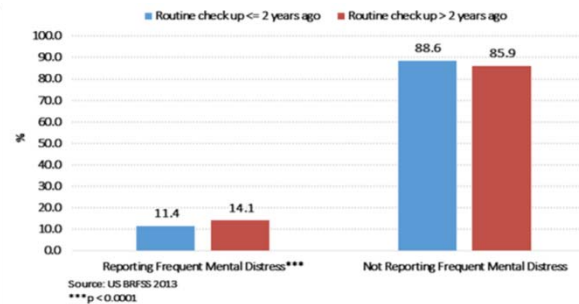


Figure 3: Percent of adults in the U.S. reporting frequent mental distress who had or not had a routine check up in the last 2 years

Results

Figures 1 to 3 display percent of adults in the U.S. 18 and older reporting FMD with our hypothesized predictors. It is evident that those reported FMD were more likely to have no insurance (16.5% vs 11.0%), about three times likely to have not seen a doctor due to cost (25.8% vs. 9.3%), and more likely to have not had a routine checkup (14.1% vs. 11.4%).

Table 1 presents crude and adjusted odds ratios for hypothesized variables with 95% confidence intervals (CI). It is evident from the unadjusted model that the hypothesized predictors were all associated with FMD. For instance, having no insurance increased the odds of FMD by 1.6 times (or 60% more likely) as compared to those with insurance (COR= 1.6; 95%CI, 1.5-1.7). Similarly, those who could not visit a doctor due to medical cost were three times more likely to having reported FMD (COR = 3.4; 95%CI, 3.3-3.5) as compared who could visit a doctor. And finally, 30 percent more likely to report FMD (COR = 1.3; 95%CI, 1.2-1.3) if they had a routine check-up more than two years ago as compared to those had a routine check within two years.

Discussion and Conclusions

While both our hypothesized variables of interest, i.e., medical cost and routine medical checkup predicted self-reported FMD, there are a few possible explanations as to why the lack of insurance did not concord with the hypothesis. One possibility is that there is effect modification (i.e., statistical interaction) of medical cost and lack of insurance. Another possibility is the existence of collinearity between our predictor variables, which is more than likely as lack of insurance and not seeing a doctor because of cost perhaps are measuring an underlying construct of lack of access to healthcare, which perhaps leads to a specification bias, distorting the relationship.

The importance of understanding a potential causality between insurance coverage and frequent mental distress cannot be understated. Given that major bodies such as the USPSTF recommending increased screening of mental health amongst the general population, more studies should be established to further determine other factors that influence frequent mental distress.

Acknowledgements

I would especially like to thank Dr. Khaleel Hussaini for his role in mentoring me through this project.