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An econometric assessment of the effect of mental illness on household spending behavior

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ABSTRACT

This paper examines the relationship between individuals' mental health status and their spending behavior. Compared to individuals without mental health problems, individuals with mental health problems may have higher discount rates and derive greater utility from spending (i.e., retail therapy). If the mentally ill have these characteristics, we would expect them to purchase goods and services that give immediate enjoyment, sacrificing longer-term savings goals. However, mental health disorders may result in a sense of worthlessness and lethargy such that less utility is derived from spending and less energy is available for spending, which would give us the opposite prediction. Using the Panel Study of Income Dynamics, we generally find a negative effect of mental illness on household spending, although the specific effects vary by the measure of mental illness, by the expenditure category, and by gender and couple status. Of particular concern, single and married women with mental illness reduce spending on education, which suggests a long-term financial cost of mental illness. In addition, we find some evidence of retail therapy with respect to a mental health screen for single and married women and with respect to a mental diagnosis for married men.

1. Introduction

There is much debate in the health literature about whether the relationship between health and economic status is driven by the impact of economic status on health or by the impact of health on economic status. Outside the field of economics, it is widely argued that the gradient—the well-established correlation between health and economic status—is driven by economic influences on health status: poor individuals receive low quality health care, have limited access to any health care, and practice riskier health behaviors. Low-income households and workers in low status jobs are more likely to experience high psychosocial stress than those in high-income households and high status jobs (Marmot, Shipley, Brunner, & Hemingway, 2001; Orpana, Lemyre, & Gravel, 2009). Contrary to this point of view, many economists argue that, while economic status likely affects health, most of the correlation is the result of *health affecting economic status* (Cutler, Deaton, & Lleras-Muney, 2006). People with poor health earn less because their health has restricted their educational attainment and their ability to be productive in the workforce compared to healthy individuals (Case, Fertig, & Paxson, 2005). However, Smith (1999) finds that the onset of a new health condition has a greater impact on reducing household wealth than it has on reducing household income or increasing medical spending. To examine what other effects health,

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mental health in particular, may have on economic status, we examine an alternate channel. We posit in this paper that a potential mechanism by which mental health may affect economic status is through household spending. In particular, *we examine whether mental health problems affect household spending behavior*. If poor mental health causes individuals to spend more to achieve short-term gratification and forgo long-term savings goals, then mental health problems could have an additional and important causal effect on long-term economic status.

Mental health problems are highly prevalent in the United States. Kessler et al. (1994) estimate that as much as 30% of the US population has a mental or substance use disorder each year. There is also new evidence that mental health problems are on the rise among high school and college age individuals (Twenge et al., 2010). For purposes of this study, we define mental illness as psychological and emotional problems that include but are not limited to depression, bipolar disorder (mania), schizophrenia, anxiety, phobias, alcohol abuse, drug addiction, and obsessive–compulsive disorder.

We know of no research on the relationship between mental health and spending. There is some research that documents a correlation between mental health and savings and debt. A study conducted by the Office of National Statistics found that while one in eleven individuals in the United Kingdom reports being in debt, one in four people with mental health problems is in debt (UK Office of National Statistics, 2002). Gresenz and Sturm (2000) find that compared to mentally healthy individuals, mentally ill individuals are seventy-five percent less likely to have any savings. However, it is unknown whether the connection between mental health and savings and debt results from spending on medical care, lower income-generating ability, reverse causality (debt causing depression and anxiety), or spending behaviors. We address this gap by directly examining whether, compared to healthy individuals, individuals with mental health problems spend more in general, and whether they spend more on durable goods, non-durable goods, or education. We also examine whether the severity of mental conditions differentially affects spending behavior, and whether there are differences in the effect of mental illnesses on spending by gender and couple status. We use an instrumental variable approach to address the endogeneity of mental health and socioeconomic status, and use fixed effects estimation to address unobserved heterogeneity across individuals.

Our results, in general, suggest that more serious cases of mental illness are associated with lower household spending, with some specific exceptions. In particular, we find that severe psychological distress reduces spending on education among single women. Single and married women reduce their spending on durable goods when they have mental illness. Single men with a non-depression diagnosis reduce spending on non-durables. However, women with mild symptoms of psychological distress increase spending on non-durable goods like recreation and clothing, and increase spending on durable goods like furniture and vehicles. Single men with episodic or acute depression spend more on non-durable goods. For married men, there is evidence of a mental health diagnosis being associated with greater spending on cars. The effects of mental illness are smaller in couple households than in single-headed households when only one spouse has a mental health problem; however, when both spouses have mental illness, the effects on overall spending and spending on non-durable goods, in particular, are negative and large.

2. Theory and background

Poor health can affect one's earnings and medical expenditures. Mental health problems, specifically, reduce the probability of employment and the level of earnings (Bartel & Taubman, 1986; Cseh, 2008; Ettner, Frank, & Kessler, 1997). Household production theory posits that individuals with lower earnings shift their household production away from purchasing goods to producing them on their own (Gronau, 1977). In addition, individuals with mental health problems tend to have a high rate of comorbidity and thus high general medical and mental health expenditures. One study found that individuals with behavioral health insurance claims had almost double the claims of individuals with only general and/or pharmacy service claims (Kathol, McAlpine, & Kishi, 2004). Thus, individuals with mental health problems may spend less than healthy individuals because they have less money available for spending. However, the effect of health on earnings and medical expenditures cannot fully explain the impact of health on economic status (Smith, 1999). Thus, in this study we estimate the effect of mental health on household spending independent of changes in earnings and medical expenditures.

The theories of time preference and the marginal utility of consumption can help us make predictions about the direction of the effect of mental health problems on spending, once we have eliminated the earnings and medical expenses channels. We will not be able to directly test the mediating role that time preference or the marginal utility of consumption play in the relationship between mental health and spending, but the results may indirectly illuminate the relative importance of these factors.

First, theory and some empirical evidence suggest that individuals with mental health problems may have a greater preference for current consumption over future consumption. As a result, we would expect mental health problems to increase spending on non-durable goods that only increase utility today, and reduce spending on investments like education that only increase utility in the future. Discounting, or delay discounting (as it is called in the psychology literature), is the decrease in the value of money or a reward as a function of the delay in time to its receipt (Ainslie, 1975; Bickel & Marsch, 2001). Individuals vary in the degree to which they discount future consumption, and those with higher discount rates are more likely to spend a greater fraction of their income on current consumption. There is a vast literature documenting the relationship