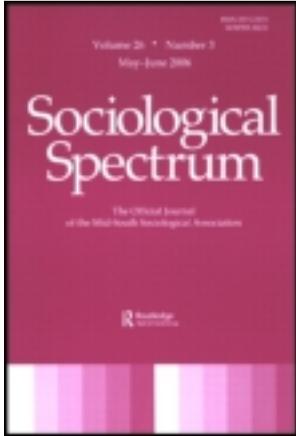


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### The Use of Psychiatric Medication, Human Capital, and the Amplification of Mistrust

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# The Use of Psychiatric Medication, Human Capital, and the Amplification of Mistrust

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This research investigates the relationships among willingness to utilize psychiatric medication, education, and three forms of mistrust—generalized mistrust, mistrust in physicians, and mistrust in psychiatric medication. Utilizing human capital theory and two waves of the U.S. General Social Survey ( $N = 2,671$ ), our findings show a curvilinear relationship between willingness to use psychiatric drugs and education, such that individuals with less than a high school diploma and those with a college or advanced degree are more willing to use psychiatric drugs compared to those with a high school degree. Also, the effects of all three forms of mistrust are amplified and have significant, negative effects on the use of psychiatric medication among college graduates. Mistrust in physicians and mistrust in psychiatric drugs matters for high school graduates, while only mistrust in psychiatric medication impacts the use of psychotropics for those with less than a high school degree.

Prevalence estimates for mental illness indicate that more than 57 million Americans have a diagnosable mental disorder (Kessler et al. 2005; Lenzenweger et al. 2007; Reeves et al. 2011). In any given year, approximately 1 in 5 American adults, aged 18 and older, contend with mental health problems that interfere with employment, social relationships, and the personal sense of control over their daily lives (Mojtabai 2011). If left untreated, many mental disorders persist and become more severe and chronic over time (Reeves et al. 2011). One relatively effective mode of treatment is the use of the newer psychiatric medications, particularly the selective serotonin reuptake inhibitors and the atypical antipsychotic agents, which are more easily tolerated and have fewer side effects than earlier generations of psychotropic drugs (Croghan et al. 2003; Leucht et al. 2012).

Despite widespread acceptance among medical professionals and demonstrated treatment efficacy, individuals are reluctant to take psychiatric medications. Although the majority of Americans endorse that these drugs are safe and effective, significantly less than half would be willing to take such medications (Croghan et al. 2003; see also Pescosolido 2010). That is, regardless of endorsing

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the efficacy and benefits of these medications, Americans still do not trust these medicines enough to actually take them, even when there is an established need or psychiatric problem (Croghan et al. 2003). In this paper, we examine whether the impact of mistrust on the willingness to use psychiatric medications is qualified by educational attainment. By investigating the relationships among psychiatric drugs, education, and mistrust, we add to the research literature in three important ways that clarify Americans' resistance to psychiatric medication.

First, utilizing nationally representative data, we assess the impact of three forms of mistrust—generalized mistrust, mistrust in physicians, and mistrust in psychiatric medications—on the utilization of psychiatric drugs. The inclusion of multiple measures of mistrust improves on existing research by helping to account for different types of attitudinal dispositions that might be important to individuals for deciding to use psychiatric medication. Specifically, while other studies have certainly accounted for mistrust in physicians and mistrust in psychiatric medications, fewer have incorporated levels of generalized mistrust, which includes the development of relatively stable cognitive schema or frames that lead an individual to interpret the intentions of others across various situations as not trustworthy. Research that has not accounted for generalized mistrust may have painted an incomplete picture of the relationship between mistrust and psychiatric medication usage.

Second, we verify whether the willingness to use psychiatric medication is equally distributed across levels of education. While low education is associated with a lack of compliance and adherence to prescribed medical regimens (Touchette and Shapiro 2008), relatively little scholarship has been devoted to exploring the usage of prescribed psychiatric drugs across the educational spectrum (e.g., less than a high school degree versus advanced degrees) (for an exception see Croghan et al. 2003). While individuals with higher education may have the financial capital to afford treatments that include the prescription of psychotropics, the ability to pay for these medications may not be sufficient for individuals to agree to take them (Boysen and Vogel 2008). Resistance among the highly education may be especially pronounced if educational achievement also provides access to other forms of treatment or alternatives to psychiatric medication. Therefore, we add to the research literature by utilizing several measures of education to accomplish a detailed accounting of how educational attainment maps onto the willingness to use psychiatric medications. Third, we explore whether education amplifies or lessens the effects of mistrust on whether individuals agree to the usage of psychiatric medicines and identify whether our indicators of mistrust are more salient in shaping willingness across three levels of formal education – less than high school diploma, high school degree, and college or advanced degree.

## BACKGROUND AND THEORY

### Human Capital, Mistrust and the Willingness to Use Psychiatric Medication

#### *Education*

Human capital theory guides this research and predicts that investments in human capital, the productive capacity of individuals developed through educational achievement, training, and experience, are positively associated with mental health and general well-being (Becker 1975; Ross and Mirowsky 2010). In fact, educational attainment has been found to be a “fundamental cause” of health and more central to health outcomes than other socioeconomic indicators

insofar as educational achievement precedes other gauges of socioeconomic status such as income and employment (Link and Phelan 1995; Phelan, Link and Tehranifar 2010).

Educational achievement may be linked to better mental health in a number of ways. Education builds analytic skills, cognitive flexibility, and the ability to engage in productive planning (Ross and Mirowsky 2010; 2011). The capacity to think through problematic situations and to plan ahead may increase an individual's ability to avoid stressors and to cope effectively when difficult situations arise. Furthermore, education is positively associated with financial capital, including income and gainful employment. Such resources may aid individuals in maintaining positive mental health insofar as such assets are associated with environments (e.g., safe housing and neighborhoods) and general circumstances (e.g., financial stability) that are conducive to psychosocial well-being (Adkins et al. 2009; Turner and Avison 2003; Schnittker 2004). Also, social capital or positive social bonds with others are more easily developed and maintained among those with higher levels of education (Coleman 1988, 1990). In turn, social capital may provide important social support and a sense of mattering that is beneficial to warding off stressors that damage mental health (Christie-Mizell et al. 2011). Nevertheless, despite the positive association between human capital and mental health, far less is known about whether and how education is connected to the willingness to utilize psychiatric medication for mental health problems. Below when we refer to "low" and "high" education, we are referring to less than a high school diploma and a college or advanced degree, respectively. We equate "average" education to those individuals with at least a high school diploma, but who have not completed college.

### *Low Education and Psychiatric Medication*

Is low education related to a higher or lower willingness to utilize psychiatric medications? In the United States, there is a duality associated with low education that predicts reasons for and against the willingness to utilize psychiatric medication among this group. With respect to less willingness, individuals with low education are more likely to hold stigmatized views of the mentally ill and mental health treatment, compared to those with higher levels of education (Boysen and Vogel 2008; Pescosolido 2010; Pescosolido and Boyer 2010). Such stigmatization may make it more likely that low education is related to a refusal to utilize psychiatric medications. Furthermore, low education is linked to a lower ability to afford quality mental health treatment that might include prescriptions for psychiatric drugs (Alvidrez 1999; Ware, Tugenberg and Dickey 2004). Therefore, those with low education may reject utilization of these drugs because they know little about them and are unlikely to find them offered as treatment options.

On the contrary, there are also reasons that might lead individuals with less than a high school degree to endorse a higher willingness to utilize psychiatric medications. For instance, these individuals face a disproportionate number of stressors, including financial strain, unstable employment, and family difficulties, associated with mental health problems (Turner and Avison 2003). The relief that such medications may offer might heighten the willingness to use psychiatric drugs. Additionally, research indicates that those with low education are more likely to lead lower or working class lives, compared to those with higher education (Kohn et al. 1990; McDermott 2006). In turn, lower and working class individuals are less likely to challenge experts or those (e.g., prescribing physicians) who are in positions of authority. For instance, a large body of the literature has established that "...[individuals in] lower social classes

[place] greater emphasis on conformity, obedience to external authority, and external appearances . . .” compared to their middle and upper class counterparts (Spenner 1988: 71; see also Kohn and Schooler 1982; McDermott 2006). Therefore, notwithstanding higher levels of stigma and restricted access to care, we contend that higher levels of stress and valuing obedience to authority will result in those with low education endorsing the usage of psychiatric medications more so than those with average or high education.

### *High Education and Psychiatric Medication*

Similar to low education, there are conditions associated with the lives of the highly educated that both encourage and inhibit the willingness to utilize psychiatric medication. On the one hand, because high education is associated with financial resources (e.g., stable employment and health insurance) and access to quality medical care, one possibility is that higher education is related to a greater willingness to utilize these prescribed drugs. Moreover, above and beyond economic capital, education is related to greater knowledge and awareness about mental health treatment (Croghan et al. 2003; Pescosolido et al. 2008). Therefore, educational achievement may reduce the stigma associated with mental illness and taking psychiatric drugs by providing individuals with information that normalizes the use of psychotropics as an acceptable form of treatment. On the other hand, research indicates that the types of distress that give way to mental health problems are less prevalent among highly educated people. Less susceptibility to such stressors may result in less mental health illness and translate into a lower willingness to need or use psychiatric medications. Similarly, higher human capital or education is also related to higher levels of social support and the ability to cope with problems – factors known to protect mental health (Aneshensel 2009). The presence of these factors among the well-educated may produce an attitude that psychotropics are not necessary and decrease the willingness to utilize psychiatric medications. Therefore, we contend that the tension between such factors as access to quality care versus less stigma and better mental health may result in less of a penchant for the willingness to use psychiatric drugs than those with low education, but a higher inclination than those with a high school education.

### *High School Completion and Psychiatric Medication*

The modal level of educational achievement in the United States is a high school degree or its equivalent, with about 85% of Americans achieving at least this level of attainment (U.S. Census Bureau 2012). Interestingly, however, relatively little is known about how average levels of education impact the usage of psychiatric drugs, compared to the other two ends of the educational continuum – high and low education. One reason for this limited knowledge is that education is most often conceptualized as a control variable and not a main independent variable of interest, with few scholars giving meaningful attention to education levels. Also, in quantitative research similar to the current study, scholars rarely utilize high school graduates as the omitted category, thereby obscuring exactly how this level of education is related to medication usage. For instance, Croghan and colleagues (2003) group high school graduates with college degree holders and compare these two groups to individuals who have not completed high school. They find that high school and college graduates are less willing to utilize psychiatric medication than their less than

high school counterparts. While this finding confirms that education is inversely related to the willingness to utilize psychotropics, this grouping of educational categories together does little to elucidate whether high school completion operates differently from college graduation.

A goal of this research is to fill this gap in knowledge by fully comparing high school completion to both the high and low ends of the educational spectrum. There is evidence that suggests that high school graduates may be less likely than either those with less than a high school degree or those with a college or advanced degree to utilize psychiatric medication. Achieving high school completion provides greater access to stable employment, health insurance, quality care and protection from some of the stressors associated with mental health problems, compared to those without a high school degree (Turner and Avison 2003); therefore, it is likely that the need and willingness to use psychiatric drugs will be less than for their low education counterparts. Compared to those with high education, individuals with a high school diploma have less access to mental health treatment and may be more likely to internalize the stigma associated with mental health problems (Pescosolido 2010; Pescosolido and Boyer 2010). These circumstances also place the high school graduate in a position to be less likely than those with high education to be willing to take psychiatric medications. With its mix of advantage and disadvantage, we propose that this middle position (i.e., high school completion) may lead to ambivalence towards psychiatric medication and a lower willingness to use psychotropics than other groups.

### *Mistrust*

In this article, we further research on how education, independently and in conjunction with mistrust, may be linked to the willingness to utilize psychiatric medication. Mistrust is marked by beliefs that individuals, situations, or institutions lack transparency, and are dishonest (Ulsaner 2002). Mistrust can be generalized or specific. Generalized mistrust lacks specificity and represents a global disposition that people and institutions are mainly untrustworthy, mostly just looking out for themselves, and seeking to take advantage of others given the chance (Hetherington 2005; Robinson and Jackson 2001). Individuals characterized by generalized mistrust face barriers to their personal and social well-being, because trust is vital to healthy social interaction and building supportive social networks. Recent research indicates that generalized mistrust is now higher than in any other period in the last half century (Wilkes 2011).

Specific mistrust applies to particular persons, situations or institutions. Deciding against taking psychiatric medication because one believes that psychiatrists and the institution of medicine lack integrity and are more interested in profits, rather than patient well-being, is an example of specific mistrust. Such mistrust may not generalize to other areas of life (e.g., to teachers or the educational institution). Specific mistrust (e.g., lack of trust in physicians or in psychiatric medications) tends to develop as part of an individual's circumscribed experience and may arise out of unsatisfactory interactions with the mistrusted entity or strong socialization from significant others to view dimly or be cautious of particular individuals, situations, or institutions (Hetherington 2005; Simpson 2006; Ulsaner 2002). While a reasonable expectation is that specific mistrust regarding medicine or psychiatric drugs (e.g., mistrust in psychiatric medicine) is inversely related to the consumption of such medications, less is known about the relationship between generalized mistrust and the willingness to take psychiatric medicines. There are at least three possibilities.

Compared to specific forms of medical mistrust, one plausible assertion might be that generalized mistrust is simply not as relevant to whether individuals decide to take psychiatric medication. Forms of mistrust that focus on physicians or psychiatric drugs may be more proximately associated with decisions not to use psychotropics. Alternatively, because high levels of generalized mistrust can be such a pervasive part of an individual's worldview, a penchant to globally mistrust may be as powerful as specific types of mistrust in deterring individuals from utilizing psychiatric medications. Finally, another possibility and one tested in this paper is that the association between mistrust, both specific and generalized, and the utilization of psychiatric medication may be qualified by educational attainment. That is, the effects of mistrust in physicians, mistrust in psychiatric medication, and generalized mistrust on psychiatric drug usage may either be amplified or lessened by human capital afforded to the individual by education.

### *High Education and the Amplification of Mistrust*

In this research, we assert that the impact that mistrust may have on the willingness to utilize psychiatric medications varies by education. Specifically, we contend that high education may amplify mistrust by allowing those with high levels of educational attainment to refuse mental health treatment that includes the use of psychiatric medication. Educational attainment as human capital embodies an array of resources, including knowledge, experience, and resources, pertinent to whether individuals select particular medical treatments. As a resource, educational attainment provides individuals with information that not only encourages the strong endorsement (or rejection) of particular attitudes, but also the information and resources to implement actions that are consonant with those attitudes. To illustrate, if a highly educated individual has experience that highly stigmatizes or makes the use of psychiatric medication distasteful, this person may have economic means that makes it possible to afford other options in the face of psychological difficulties. Alternative treatments may include talk therapies, changes in diet, acupuncture, aromatherapy, biofeedback, guided imagery, yoga, or chiropractic treatments, to name a few (Fugh-Berman and Cott 1999; Lake and Spiegel 2007). Many of these treatments are quite expensive and are not fully paid for by traditional insurance plans. Also, such treatments are not necessarily available to those with low education and fewer financial resources.

When high education is coupled with mistrust, resourced individuals may also reduce the need for psychiatric medications by removing themselves from stressful situations that trigger mental health issues. For example, if contentious relationships at work are causing undue stress and mental health issues, highly educated people may be able to more easily find other employment, to take a leave of absence from employment, or to simply afford not to work at all (Coleman 1990). Moreover, educational attainment is associated with greater social capital networks, including social support, which is known to help individuals deal with psychological distress (Aneshensel 2009). In turn, individuals, who have access to such support and high levels of mistrust related to psychotropics, may rely on these networks for help in lieu psychiatric medication. Therefore, we argue that mistrust is amplified by high education. When mistrust is present among the highly educated, generalized mistrust, mistrust in physicians, and mistrust in psychiatric medications will decrease the willingness to utilize psychotropic drugs more than for their less educated counterparts.

### *Other Important Factors*

Research has pinpointed several factors, including demographic characteristics, religion, income and employment, which are important for understanding the relationships among willingness to utilize psychiatric medication, education, and mistrust. Several studies have indicated that racial minorities such as African Americans attain less education and are much less likely to endorse the usage of psychiatric drugs, compared to their white counterparts (Brandon, Issac, and LaVeist 2005; Schnittker 2003; Van Ryk and Burke 2000). While the gender gap in educational attainment has largely closed in recent years (DiPrete and Buchmann 2006; Freeman 2004) and women report lower levels of mistrust than men (Wilkes 2011), women are more likely to be willing to utilize psychiatric medication, compared to men. Age and region of residence may also play roles in determining willingness to take psychiatric drugs. For instance, with age being inversely related to both education and mistrust (Wilkes 2011), only between 3% and 5% of older Americans, over age 50, seek out any sort of mental health treatment (Bartels et al. 2005; American Psychological Association 2005). On average, Southerners attain less education (Parcel and Dufur 2009), are more mistrusting (Wilkes 2011), and have less access to mental health services (Zuvekas and Meyerhoefer 2009), compared to Americans living in other parts of the country.

Religious involvement is associated with lower levels of mistrust, but regardless of educational attainment, individuals often turn to religion and faith as a coping resource when under emotional distress (Krause 2010; Thompson, Thomas and Head 2012). Therefore, high levels of religious involvement are associated with better mental health and less willing to engage in traditional mental health treatments. Across levels of education and mistrust, family structure may impact the willingness to utilize psychiatric medications to the extent that the roles of spouse and parent provide social support that can positively affect psychological well-being and stressors that may compromise mental health (Grzywacz and Bass 2003; Mizell and Steelman 2000). Income and employment are positively associated with education (Schnittker 2004), negatively related to mistrust (Putnam 2000; Ulsaner 2002), and positively associated with access to mental health treatment, including psychiatric medication (Schnittker 2003). Finally, overall health and psychosocial well-being (e.g., high levels of personal happiness) are positively related to educational attainment (Noddings 2003) and inversely associated with mistrust (Hughes and Thomas 1998). Further, those in good health and with a high sense of well-being are less likely to have mental health problems that require medication (Barry 2009).

## SUMMARY AND HYPOTHESES

In this paper, we investigated the relationships among the willingness to utilize psychiatric medication, educational attainment and mistrust. We had three goals. Our first goal was to establish whether the relationship between willingness to use psychiatric drugs and education is curvilinear. The next goal was to establish if generalized mistrust, mistrust in physicians, and mistrust in psychiatric medication have direct effects on the usage of psychotropics. Finally, our third goal was to assess whether education moderates the relationship between the willingness to utilize psychiatric medication and the three types of mistrust explored here. We developed the following hypotheses:

Hypothesis 1: The relationship between the willingness to utilize psychiatric medication and education is curvilinear, such that individuals with low (i.e., less than high school) and high (i.e., college or advanced degree) are more willing to use psychiatric drugs than those with a high school degree.

Hypothesis 2a–c: The relationship between the willingness to utilize psychiatric medication is inversely related to (a) generalized mistrust, (b) mistrust in physicians, and (c) mistrust in psychiatric medication.

Hypothesis 3a–c: Educational attainment will moderate the impact of (a) generalized mistrust, (b) mistrust in physicians, and (c) mistrust in psychiatric medication on the willingness to utilize psychiatric medication such that mistrust has a stronger negative impact for the most highly educated.

## DATA AND MEASURES

Data for this study were drawn from the General Social Survey (GSS), which has been conducted biennially from 1979–2010 by the National Opinion Research Center (Smith et al. 2011). Each survey samples a representative, random sample of the non-institutionalized American population aged 18 and over. In addition to a standard set of core variables, GSS researchers have also included specialized modules on health and medical care. The data for this study were taken from 1998 and 2006—years in which respondents were queried about their willingness to use psychiatric medication. Across the two survey years, our total sample size is 2,671. For the current study, 48.78% were from wave 1 (1998), and 51.22% were from wave 2 (2006). Table 1 displays the descriptive statistics for all study variables.

### Measures

#### *Dependent Variable*

Four indicators comprised the *willingness to use psychiatric medication*. Respondents were asked to respond from 1 (very unlikely) to 5 (very likely) to four questions. The questions inquired how likely they would be to take doctor-prescribed psychiatric medication in the following situations: (1) “because you were having trouble in your personal life;” (2) “because you did not know how to cope anymore with the stresses of life;” (3) “because you were feeling depressed, tired, were having trouble sleeping, and concentrating, and felt worthless;” and (4) “for no apparent reason, you were having periods of intense fear in which you were trembling, sweating, feeling dizzy, and feared losing control or going crazy.” These four items were then summed, yielding a scale that ranged from 4 (lower willingness) to 20 (higher willingness). The scale had high internal reliability ( $\alpha = .87$ ). The mean for willingness to use psychiatric medication was 11.74 for the total sample, while respondents with less than a high school education reported a greater willingness to use psychiatric medication (mean = 12.41) than respondents with higher education—the mean of respondents with a high school diploma or more was 11.50 and the mean for respondents with a college degree or more was 11.87.

TABLE 1  
Means, Percents and Standard Deviations (SD) for all Study Variables. General Social Survey: 1998 and 2006 (N=2,671)

	Total sample N = 2671		Less than high school degree N = 389		High school or some college N = 1521		College or more N = 761	
	Mean/Percent	SD	Mean/Percent	SD	Mean/Percent	SD	Mean/Percent	SD
Willingness to Use Psychiatric Medication <sup>1</sup>	11.74	4.92	12.41	5.12	11.50 <sup>a</sup>	4.93	11.87	4.78
<i>Demographics, Religion, and Well-being</i>								
African American (1 = Yes)	14.75%	—	22.37%	—	16.17% <sup>a</sup>	—	8.02% <sup>b,c</sup>	—
White (1 = Yes)	77.35%	—	68.90%	—	76.59% <sup>a</sup>	—	83.18% <sup>b,c</sup>	—
Other Race/Ethnicity (1 = Yes)	7.90%	—	8.74%	—	7.23%	—	8.80%	—
Female (1 = Yes)	57.13%	—	53.47%	—	60.75% <sup>a</sup>	—	51.77% <sup>c</sup>	—
Age	45.93	16.89	51.68	19.67	45.09 <sup>a</sup>	16.96	44.66 <sup>b</sup>	14.48
Married (1 = Yes)	46.76%	—	38.05%	—	45.76% <sup>a</sup>	—	53.22% <sup>b,c</sup>	—
Parent (1 = Yes)	71.06%	—	79.70%	—	73.57% <sup>a</sup>	—	61.63% <sup>b</sup>	—
South (1 = Yes)	37.07%	—	46.53%	—	36.56% <sup>a</sup>	—	33.25% <sup>b,c</sup>	—
Religious Attendance (1 = Yes)	69.26%	—	60.67%	—	69.30% <sup>a</sup>	—	73.59% <sup>b,c</sup>	—
Strong Religious Intensity (1 = Yes)	37.17%	—	34.19%	—	35.96% <sup>a</sup>	—	41.13% <sup>b,c</sup>	—
Health: 1(Poor) to 4 (Excellent)	3.05	.75	2.66	.80	3.03 <sup>a</sup>	.73	3.29 <sup>b,c</sup>	.66
Happiness: 1 (Not At All) to 3 (Very)	2.20	.62	2.09	.70	2.19 <sup>a</sup>	.61	2.29 <sup>b,c</sup>	.59
<i>Socioeconomic Status</i>								
Education (years)	13.55	2.84	—	—	—	—	—	—
Less Than High School (1 = Yes)	14.56%	—	—	—	—	—	—	—
High School Diploma (1 = Yes)	56.95%	—	—	—	—	—	—	—
More than College (1 = Yes)	28.49%	—	—	—	—	—	—	—
Income	46791	34146	28957	22736	43274 <sup>a</sup>	30625	62936 <sup>b,c</sup>	38833
Fulltime Employment (1 = Yes)	55.49%	—	32.13%	—	55.49% <sup>a</sup>	—	67.41% <sup>b,c</sup>	—
<i>Mistrust</i>								
Generalized Mistrust <sup>2</sup>	6.07	1.84	6.70	1.73	6.21 <sup>a</sup>	1.82	5.46 <sup>b,c</sup>	1.75
Mistrust in Physicians <sup>3</sup>	11.25	3.40	11.12	3.57	11.34	3.44	11.12	3.20
Mistrust in Psychiatric Medicine <sup>4</sup>	8.72	2.45	8.54	2.38	8.91 <sup>a</sup>	2.55	8.43 <sup>c</sup>	2.23
Wave 1	48.78%	—	52.96%	—	49.38%	—	45.50%	—

Notes. <sup>1</sup>Willingness to Use Psychiatric Medications ranges from 4 (less likely) to 20 (more likely).

<sup>2</sup>Generalized Mistrust ranges from 3 (less mistrust) to 9 (greater mistrust).

<sup>3</sup>Mistrust in Physicians ranges from 5 (less mistrust) to 25 (greater mistrust).

<sup>4</sup>Mistrust Psychiatric Medicine ranges from 4 (less mistrust) to 20 (greater mistrust).

<sup>a</sup>Denotes significant differences between Less than High School and High School Diploma at  $p < .05$  (two-tailed test).

<sup>b</sup>Denotes significant differences between Less than High School and College or More at  $p < .05$  (two-tailed test).

<sup>c</sup>Denotes significant differences between High School Diploma and College or more at  $p < .05$  (two-tailed test).

### *Independent Variables*

*Education* is measured both continuously (years) and categorically as a set of dummy variables. The average, cumulative amount of years of education for the total sample was 13.55, approximating about a year and a half of education past high school. Respondents with *less than a high school* education made up 14.56% of the sample (less than 12 years of education;  $N = 389$ ). The majority of the sample, or 56.95%, had at least a *high school degree or some college*, including those with a GED ( $N = 1,521$ ). This category included those with 12 to 15 years of education, but who had not completed a four-year degree. Finally, those who reported having a *college or advanced degree* was 28.49% of the sample (16 or more years of education;  $N = 761$ ). We did sensitivity analyses that confirmed that these categorical divisions were appropriate for the current study.

Three measures of mistrust were used in this study. First, *generalized mistrust* was captured by a three-item scale. Respondents were asked, generally speaking: (1) “would you say that most people can be trusted or that you can’t be too careful in life?” (2) “would you say that most of the time, people try to be helpful, or that they are mostly just looking out for themselves?” and (3) “do you think most people would try to take advantage of you if they got a chance, or would they try to be fair?” Response categories ranged from 1–3 and were recoded so that high values indicated high mistrust. The generalized mistrust measure was reliable ( $\alpha = .70$ ) and when summed ranged from 3 (lower mistrust) to 9 (higher mistrust). There were significant differences in generalized mistrust by education level. The less than high school subsample had the highest generalized mistrust (mean = 6.70), while those with a high school diploma had higher levels of generalized mistrust (mean = 6.21) compared to those with a college degree or more (mean = 5.46).

Second, *mistrust in physicians* was captured by a five-item scale, including: (1) “I doubt that my doctor really cares about me as a person”; (2) “I trust my doctor’s judgments about my medical care”; (3) “I trust my doctor to put my medical needs above all other considerations when treating my medical problems”; (4) “I trust that my doctor is a real expert in taking care of my problems”; and (5) “I trust my doctor to tell me if a mistake was made about my treatment.” Each item was scored from 1 (strongly agree) to 5 (strongly disagree) and recoded to reflect mistrust. The mistrust in physicians scale was reliable ( $\alpha = .82$ ) and when summed ranged from 5 (lower mistrust) to 25 (higher mistrust). The mean of mistrust in physicians for the total sample was 11.25 and scores did not significantly differ by education level. Mistrust in physician is positively correlated with generalized mistrust ( $r = .051, p = .009$ ).

Finally, a four-item scale was created to capture *mistrust in psychiatric medication*. Respondents were asked about their confidence in psychiatric medication and whether they trust: (1) “taking these medications helps people deal with day-to-day stresses”; (2) “taking these medications makes things easier in relations with family and friends”; (3) “these medications help people control their symptoms”; and (4) “taking these medications help people feel better about themselves.” These items were summed and the scale for mistrust in psychiatric medication ranged from 4 (lower mistrust) to 20 (higher mistrust) ( $\alpha = .82$ ). The mean of mistrust in psychiatric medication was significantly higher for respondents with a high school diploma (mean = 8.91) compared to those with less than high school (mean = 8.54) and those with a college or advanced degree (mean = 8.43). Mistrust in psychiatric medication is positively associated with generalized mistrust ( $r = .049, p = .011$ ) and mistrust in physicians ( $r = .175, p = .001$ ).

### Control Variables

*Race and ethnicity*, measured by respondent's self-identification as African American (1 = Yes), White (1 = Yes), or "other" race-ethnicity (1 = Yes), are included in the models developed below. Whites comprised 77.35% of the sample and were the omitted category for the analyses. African Americans made up 14.75% of the sample and those of other race and ethnic groups comprised 7.9% of the sample. To control for *sex*, we coded females (1 = Yes) and compared them to males. Females comprised 57.13% of our sample. The greatest percentage of females fell into the subsample with a high school diploma (60.75%), while 53.47% and 51.77% of the less than a high school and college or more subsamples were female, respectively. *Age*, measured in years, ranged from 18 to 89 years old. The average age for the total sample was approximately 46, while the average age for the less than high school subsample was significantly higher (mean = 52) than the two other groups (mean = 45). We log age in the multivariate analyses below to prompt heterogeneity of error variance.

In terms of family structure, we compared those who are *married* (1 = yes) to those who are not, and those who are *parents* (1 = yes) to those who are childless. Fewer respondents with less than a high school education reported being married (38.05%) than respondents with a high school diploma (45.76%) or a college degree (53.22%). More of those who reported having less than a high school degree are parents (79.70%), compared to those with high school diploma (73.57%) and those with a college or advanced degree (61.63%). Residents of the *South* (1 = yes) are compared to those living in all other regions. Nearly 47% of respondents with less than high school resided in the South, whereas 37% of the high school diploma subsample and 33% of the college or advanced degree subsample resided in the South.

We compared those who report *religious attendance* (1 = yes) to those who reported no religious attendance. Also, respondents were queried about the intensity (i.e., not strong at all, somewhat strong, or very strong) of their religious affiliation. Those who reported very *strong religious intensity* (1 = yes) were compared to all others. The college graduates in our sample reported more religious attendance (73.59%) than those with less than a high school degree (69.305) or those with a high school degree (60.67%). Similarly, those with college degrees reported stronger religious intensity (41.13%), compared to high school graduates (36.96%) and those who did not finish high school (34.19%).

In addition to education, we measured socioeconomic status in two additional ways. Family *income* was measured in thousands of dollars and logged to correct for skewness. We also compared those with *full-time employment* (1 = yes) to those working part-time, unemployed, or out of the labor force. The average family income and rate of full-time employment increased significantly as educational levels increased. Respondents with less than high school averaged an income of \$28,957 and 32.13% were employed full-time. Respondents with high school diploma or more averaged an income of \$43,274 and 55.49% were employed. Respondents with college or more averaged an income of \$62,936 and 67.41% were employed full time.

Finally, general health and well-being may shape both whether an individual perceives a need for psychiatric medication and willingness to take such drugs. We included a measure of overall health, inclusive of both mental and physical wellness, in the models developed below. This measure of health queried each respondent about overall health status and is coded to range from 1 (poor health) to 4 (excellent health). Further, we incorporated a measure of overall happiness, a measure of psychosocial well-being. Happiness was coded to range from 1(not at all happy) to

3 (very happy). College graduates reported better health (mean = 3.29), compared to their less than high school (mean = 2.66) and high school graduate (mean = 3.03) counterparts. In turn, high school graduates averaged better health than those with less than a high school degree. Similarly, high school (mean = 2.19) and college (mean = 2.29) reported greater happiness than those with less than a high school degree (mean = 2.09). However, college graduates were significantly happier than those with high school diplomas.

### ANALYTIC STRATEGY

In two steps, we utilized regression analyses to test our three hypotheses. For the first step, the full model estimated takes the form:

$$\begin{aligned} \text{willingness}_i = & \beta_0 + \beta_1 \text{educ}_i + \beta_2 \text{genm}_i + \beta_3 \text{phym}_i \\ & + \beta_4 \text{medm}_i + \beta_5 \mathbf{DEM}_i + \beta_6 \mathbf{REL}_i + \beta_7 \mathbf{SES}_i + \varepsilon_i, \end{aligned}$$

where willingness to utilize psychiatric medication ( $\text{willingness}_i$ ) for respondent  $i$  is a function of education ( $\text{educ}_i$ ), generalized mistrust ( $\text{genm}_i$ ), mistrust in physicians ( $\text{phym}_i$ ) and mistrust in psychiatric medications ( $\text{medm}_i$ ), controlling for demographic variables ( $\mathbf{DEM}_i$ ), religion ( $\mathbf{REL}_i$ ), and socioeconomic status ( $\mathbf{SES}_i$ ). Lower-case variables such as  $\text{willingness}_i$  represent scalar variables whereas upper-case variables such as  $\mathbf{DEM}_i$  represent vector variables indicating that more than one type of demographic characteristics is imbedded in  $\mathbf{DEM}_i$ . Additionally, all models presented are adjusted for Wave 1 (1 = Yes), compared to Wave 2.

In the first part of the analysis, we utilized five additive regression models. We began with a baseline model that included demographics and religion only to estimate willingness to use psychiatric medication (Model 1). In the next model, the demographic and religion variables were removed from the model and willingness to utilize psychiatric medication was regressed on education, including its quadratic term (Model 2). Subsequently, education was removed from the estimation and all three forms of mistrust were used as predictors (Model 3). Then, Models 2-3 were combined such that willingness to utilize psychiatric medication was regressed on education (years), a quadratic term for education, and the mistrust variables (Model 4). Finally, we estimated the full model, which included all independent and control variables of interest (Model 5). Estimating this series of models allowed us to assess the impact of our main independent variables of interest with and without other relevant variables in the model.

In the second part of the analysis, we produced three equations predicting the willingness to utilize psychiatric medication for three groups: (1) those with less than a high school degree; (2) those with a high school diploma or some college; and (3) those with 16 years of education or more, including college and/or advanced degrees. For each group, these models included generalized mistrust, mistrust in physicians, and mistrust in medications as well as all of the control variables. This strategy allowed us to compare significance and size of effects for each form of mistrust across all three educational groups.

### RESULTS

Our baseline model, without any of the independent variables, is reflected in Table 2, Model 1. We found that racial and ethnic minorities are less inclined to utilize psychiatric drugs, compared to their white counterparts. Additionally, women expressed a higher willingness to use such

TABLE 2  
Willingness to Use Psychiatric Medication Regressed on Selected Independent Variables. General Social Survey: 1998 and 2006 (N=2,671)<sup>1</sup>

	(1) b (se)	(2) b (se)	(3) b (se)	(4) b (se)	(5) b (se)
<i>Demographics, Religion, and Well-being</i>					
African American (1 = Yes)	-1.521*** (.281)				-1.252*** (.268)
Other Race or Ethnicity (1 = Yes)	-1.092** (.352)				-.838* (.351)
Female (1 = Yes)	.568** (.192)				.316 (.181)
Age (Logged)	1.177*** (.278)				.227 (.274)
Married (1 = Yes)	-.619*** (.203)				-.079 (.203)
Parent (1 = Yes)	.178 (.235)				.154 (.220)
South (1 = Yes)	.119 (.200)				.201 (.185)
Religious Attendance (1 = Yes)	-.089 (.218)				.005 (.204)
Strong Religious Intensity (1 = Yes)	-.591** (.211)				-.576** (.197)
Health: 1(Poor) to 4 (Excellent)	-.629*** (.126)				-.619*** (.126)
Happiness: 1 (Not At All) to 3 (Very)	-.585** (.197)				-.576** (.197)
<i>Socioeconomic Status</i>					
Education (years)		-.688*** (.176)		-.485** (.163)	-.407* (.163)
Education Squared		.025*** (.007)		.016** (.006)	.016** (.006)
Income (Logged)					-.247* (.107)
Fulltime Employment (1 = Yes)					-.239 (.193)
<i>Mistrust and Wave 1</i>					
Generalized Mistrust <sup>2</sup>			-.087 (.048)	-.098* (.049)	-.090 (.052)
Mistrust in Physicians <sup>3</sup>			-.100*** (.026)	-.098*** (.026)	-.121*** (.026)
Mistrust in Psychiatric Medicine <sup>4</sup>			-.717*** (.036)	-.713*** (.036)	-.688*** (.036)
Wave 1	-1.237*** (.186)	-1.288*** (.189)	-917*** (.177)	-939*** (.178)	-862*** (.177)
Constant	11.645***	16.835**	20.085*	23.580**	24.824***
R-square	.061	.023	.159	.162	.195

Notes. <sup>1</sup>Willingness to Use Psychiatric Medication ranges from 4 (less likely) to 20 (more likely).

<sup>2</sup>Generalized Mistrust ranges from 3 (less mistrust) to 9 (greater mistrust).

<sup>3</sup>Mistrust in Physicians ranges from 5 (less mistrust) to 25 (greater mistrust).

<sup>4</sup>Mistrust in Psychiatric Medicine ranges from 4 (less mistrust) to 20 (greater mistrust).

\*p < .05; \*\*p < .01; \*\*\*p < .001 (two-tailed tests).

medicines, and as individuals in our sample aged they were more willing to take psychiatric drugs. Furthermore, marriage and strong religiosity intensity were inversely related to endorsing the use of psychotropics. Finally, this model revealed that Wave 1 (1998) respondents reported lower levels of willingness to utilize psychiatric medications than their Wave 2 (2006) counterparts.

Models 2–3 tested the impact of education and our three forms of mistrust, respectively, on the dependent variable. The results indicated that education has a curvilinear relationship with willingness to utilize psychiatric medication (Model 2). Additionally, mistrust in physicians and mistrust in psychiatric medicine reduced the willingness to take such drugs (Model 3). Table 2, Model 4 combined Models 2–3. Although reduced in the size of effects, all variables in the previous two models remained significant: the curvilinear association with years of education was persistent as was the negative impact of mistrust in physicians and psychiatric medication. One notable difference in this fourth model was that generalized mistrust showed a negative, significant effect on the willingness to utilize psychiatric medications.

Table 2, Model 5 represented the full regression model. With the exception of age and marriage which were non-significant, all demographic and religion variables retained the same association with willingness to utilize psychiatric medication. Racial minorities reported lower levels of willingness, compared to whites, and women had higher levels compared to men. Further, strong religious intensity continued to be inversely related to the willingness to utilize psychiatric medication. New to this final model were income and full-time employment. While employment was not significant, income was inversely related to the usage of psychiatric medication.

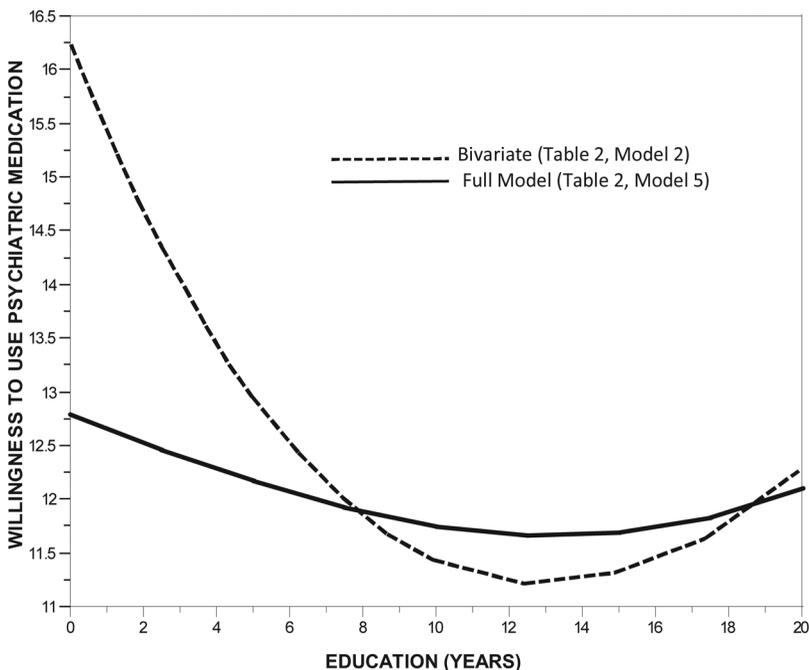


FIGURE 1 The bivariate and multivariate relationship between education and willingness to use psychiatric medication.

With respect to our main independent variables of interest, education and the three forms of mistrust, these factors had relationships to willingness similar to prior models, although reduced in the size of their effects. Education maintained a curvilinear relationship to willingness to utilize psychiatric medications. This relationship is displayed in Figure 1. The dotted line in the figure represents the bivariate relationship between willingness and education, adjusted for Wave 1 (Table 2, Model 2). The solid line shows the effects of education in the final model (Table 2, Model 5). The trajectory of both lines indicated that those with lower education expressed greater willingness to utilize psychiatric medications, with a steady decline until around 12 years of education. After about 12 years of education or approximately the equivalent of a high school diploma, willingness to utilize psychiatric drugs increased. This pattern was more dramatic in the bivariate regression model, including higher willingness at low levels of education, a steeper decrease in willingness to use between no formal education and 12 years, and a higher incline for those with more than 12 years of education. In the full regression model, the curvilinear relationship between willingness to

TABLE 3  
Willingness to Use Psychiatric Medication Regressed on Selected Independent Variables by Education Level.  
General Social Survey: 1998 and 2006<sup>1</sup>

	Less than high school <i>N</i> = 389 <i>b</i> (se)	High school or some college <i>N</i> = 1521 <i>b</i> (se)	College or more <i>N</i> = 761 <i>b</i> (se)
<i>Demographics and Family Structure</i>			
African American (1 = Yes)	-.981 (.677)	-1.355*** (.339)	-1.367* (.627)
Other Race or Ethnicity (1 = Yes)	-.820 (1.007)	-.699 (.473)	-.997 (.646)
Female (1 = Yes)	1.158* (.545)	.256 (.241)	-.011 (.334)
Age (Logged)	-.197 (.728)	.150 (.353)	.890 (.625)
Married (1 = Yes)	-.086 (.590)	-.046 (.267)	-.060 (.389)
Parent (1 = Yes)	.842 (.702)	-.043 (.291)	-.061 (.401)
South (1 = Yes)	.647 (.528)	.155 (.242)	.242 (.352)
Religious Attendance (1 = Yes)	-.519 (.568)	.125 (.264)	.006 (.415)
Strong Religious Intensity (1 = Yes)	-.391 (.576)	-.602* (.259)	-.661 (.375)
Health: 1(Poor) to 4 (Excellent)	-.029 (.335)	-.692*** (.165)	-.977*** (.258)
Happiness: 1 (Not At All) to 3 (Very)	-.173 (.392)	-.682*** (.201)	-.540 (.294)
<i>Socioeconomic Status</i>			
Income Logged	-.115 (.263)	-.279* (.142)	-.227 (.239)
Fulltime Employment (1 = Yes)	-.067 (.594)	-.406 (.248)	-.206 (.382)
<i>Mistrust and Wave 1</i>			
Generalized Mistrust <sup>2</sup>	.070 (.154)	-.072 (.067)	-.210* (.099)
Mistrust in Physicians <sup>3</sup>	-.108 (.074)	-.109** (.034)	-.191*** (.053)
Mistrust in Psychiatric Medicine <sup>4</sup>	-.572*** (.110)	-.723*** (.045)	-.730*** (.074)
Wave 1	-.568 (.521)	-.879*** (.231)	-.655* (.331)
Constant	19.819***	26.449***	25.470***
<i>R</i> -square	.121	.223	.210

Notes. <sup>1</sup>Willingness to Use Psychiatric Medication ranges from 4 (less likely) to 20 (more likely).

<sup>2</sup>Generalized Mistrust ranges from 3 (less mistrust) to 9 (greater mistrust).

<sup>3</sup>Mistrust in Physicians ranges from 5 (less mistrust) to 25 (greater mistrust).

<sup>4</sup>Mistrust in Psychiatric Medicine ranges from 4 (less mistrust) to 20 (greater mistrust).

\**p* < .05; \*\**p* < .01; \*\*\**p* < .001 (two-tailed tests).

utilize psychiatric medications and education persisted, but with less difference between the low and high education. Finally, mistrust in physicians and mistrust in psychiatric medications sustained negative, inverse relationships, while generalized mistrust had no impact—similar to Model 3—when the measures of mistrust were first introduced into the estimation.

Table 3 represented our test of whether generalized mistrust, mistrust in physicians, and mistrust in psychiatric medications varied by education. Generalized mistrust decreased the willingness to use psychiatric drugs for those with a college degree or more, with no impact on respondents with a high school degree or less than high school. The negative effects of mistrust in physicians only affected two groups: those with a high school degree and those with a college degree or more. The size of the effect did not differ for these two groups. Mistrust in psychiatric medications decreased the willingness to utilize psychiatric drugs regardless of educational level and the size of the effect did not vary across the three groups.

Other interesting findings emerged in this part of the analysis. Among those with a high school diploma, African Americans reported less willingness compared to white, while those of “other” race or ethnicity reported less willingness than their white counterparts among those with a college degree or more. A gender difference, in which women had greater willingness than men, arose only for those with less than a high school degree. Age, which had a positive effect on willingness, mattered only for those with a college or advanced degree and the negative impact of strong religious intensity was only significant for those with a high school diploma. Finally, income and employment were only significant in the equation for those with a high school diploma. Both income and full-time employment reduced the willingness to utilize psychiatric medication for this group.

## DISCUSSION AND CONCLUSIONS

We explored the relationships among willingness to utilize psychiatric medication, education, and three forms of mistrust—generalized mistrust, mistrust in physicians, and mistrust in psychiatric medication. Utilizing a human capital framework, we developed and tested three hypotheses. First, we hypothesized that the relationship between the willingness to utilize psychiatric medication and education was curvilinear, such that individuals with low (i.e., less than high school) and high (i.e., college or advanced degree) are more willing to use psychiatric drugs than those with a high school degree (H1). We found support for this prediction. Compared to individuals with a high school degree, individuals who had low education reported the highest willingness to use physician prescribed psychiatric medication. Moreover, respondents who reported having a college degree or more also endorsed a higher willingness to use psychiatric drugs than high school graduates, but at lower levels than those who had not completed high school. Consistent with the human capital perspective, these findings supported that, at low levels of human capital, individuals were likely to be compliant with authority (e.g., a prescribing physician). Conversely and also supported by human capital theorizing, the higher levels of willingness reported by those with college degrees or more were likely a result of high education being associated with greater access to health care and less stigma connected to such medications.

Second, we predicted that the relationship between the willingness to utilize psychiatric medication is inversely related to generalized mistrust (H2a), mistrust in physicians (H2b), and mistrust in psychiatric medication (H2c). We did not find support for a negative relationship between

willingness and generalized mistrust, but we did find that mistrust in physicians and mistrust in psychiatric medication were inversely related to willingness. However, these findings in the second hypothesis did not hold as we assessed whether mistrust operated differently by education.

Third, we anticipated that educational attainment would moderate the impact of generalized mistrust (H3a), mistrust in physicians (H3b) and mistrust in psychiatric medication (H3c) on the willingness to utilize psychiatric medication such that mistrust has a stronger negative impact or is amplified for the most highly educated. We tested this hypothesis in two contexts – comparing (1) those with less than a high school diploma versus those with a college degree or more and (2) those with a high school diploma versus those with a college degree or more. Our findings revealed support for hypothesis 3a, because generalized mistrust significantly reduced willingness for respondents with a college degree or more. Generalized mistrust did not impact whether individuals with less than a high school degree or those with a high school diploma were willing to utilize psychiatric medications. In the context of comparing individuals with less than a high school degree to those with a college degree or more, we also found support for hypothesis 3b; mistrust in physicians reduced the willingness to utilize psychiatric medication for those who completed college or advanced degrees, but not for those with less than a high school degree. However, in the comparison of high school graduates to those with college or advanced degrees, we did not find support for hypothesis 3b; mistrust in physicians reduced the willingness for both groups and the size of the effect did not differ. Finally, in our test of hypothesis 3c, we did not find support for the notion that the effect of mistrust in psychiatric medicine on willingness to utilize psychiatric medication varies by education. In fact, mistrust in psychiatric drugs reduced willingness for all respondents, regardless of education and with no difference in the size of effects.

All together, the results associated with hypothesis 3a–c indicated that all three forms of mistrust have significant, negative effects on the most highly educated in the sample. Interestingly, even though those with a college or advanced degree had equal or lower levels of mistrust compared to the two other groups, mistrust appeared to be more proximate to their decisions to use prescribed psychiatric medication. Their higher level of human capital potentially clarifies this relationship. Recall that human capital is not only years of education, but also is connected to experience, knowledge, greater cognitive flexibility, and social capital. These factors (e.g., experience, knowledge, and social capital) are likely brought to bear as well-educated individuals do research and think through the issues associated with whether they should take psychiatric medication. Therefore, if mistrust remains after this investigative process, human capital theory would support that a highly educated individual likely perceives mistrust as being grounded in rationality and a guidepost for how to proceed. Moreover, because other resources (e.g., financial capital) are likely to be higher among the highly educated, the larger spectrum of options available for dealing with psychological distress may further allow mistrust to guide whether they are willing to use psychiatric medication, compared to their less educated counterparts.

The impact of the three levels of mistrust varied for those in the sample with lower human capital. For those with high school degrees, generalized mistrust did not matter, but their willingness to utilize psychiatric medication was decreased by mistrust in physicians and mistrust in psychiatric drugs. For those with less than a high school degree, only mistrust in psychiatric medications mattered. That is, those with the lowest education were least affected by generalized mistrust and mistrust in physicians. This pattern, wherein only mistrust that is directly focused on psychiatric medication had a significant impact, may be the case to the extent that low human capital is associated with high levels of conformity and obedience to authority.

The desire to conform and to appear inconspicuous compared to others may dull the impact of generalized mistrust, while holding authority figures (e.g., prescribing physicians) in high esteem may nullify the effect of mistrust in physicians on the willingness to utilize psychiatric medications. Therefore, mistrust matters most for the less than high school group when it is focused specifically on psychiatric medication.

Theoretical reasoning that connects human capital to worldviews that value conformity to social norms and obedience to authority may also explain why mistrust matters more for high school graduates compared to those with less than a high school degree, but less so than for those with a college degree. In addition to more years of education, high school graduates may have more gainful employment and higher levels of income, compared to those who do not complete high school. Such achievement makes the social status of the high school graduate less tenuous, and this situation, combined with greater resources and freedom, may make mistrust a more salient feature in determining the willingness to utilize psychiatric medications. Using the same rationale, human capital would also explain why mistrust matters less for high school graduates compared to their collegiate counterparts. In comparison to those with college degrees, high school graduates have fewer resources and less control over how mistrust manifests itself with respect to the usage of psychiatric medication. These differences in mistrust, coupled with the greater negative impact of other covariates (e.g., religious intensity, income, and employment), accounted for the lower willingness to utilize psychiatric medication among high school graduates.

Several other notable differences by education resulted from this research. One of these findings was that the usual race-gender gaps in willingness to use psychiatric drugs found in the literature do not exist across all three levels of education. For instance, many studies have reported a black-white gap, wherein African Americans are less willing to take psychiatric drugs (see e.g., Schnittker 2003). Interestingly, we found the black-white gap only among high school graduates. The highest (college or advanced degree) and lowest (less than a high school degree) human capital neutralized black-white differences, which suggests that the attitudes and conditions of life associated with low education and high education lead African Americans and whites to equivalent levels of willingness to utilize psychiatric medication. However, the differences among African American and white high school graduates were not nullified, because there is greater variability by race in the conditions of life. For example, people with high school degrees may hold a variety of employment, ranging from nail technician to mail carrier to real estate agent. This variability gives way to greater advantages (or disadvantages) depending on where the high school graduate falls along the social status gamut. What is known is that African Americans in this group (i.e., high school educated) have significantly lower occupational prestige and even higher levels of unemployment than their white counterparts (Adkins et al. 2009; Ross and Mirowsky 2010). Such black-white variation can also be applied to marriage rates, number of dependent children, region of residence, and income. These black-white differences may make African Americans more susceptible to refusing psychiatric medication, compared to their white counterparts. This racial variation is much greater than among the less educated and the highly educated. We should also note that the “other race-ethnicity” was inversely associated with willingness to utilize psychiatric drugs among those with a college degree or more, while this status was not significant in the other two groups. However, because this group is so small and represents an amalgam of ethnicities, this finding should be interpreted with caution.

A second additional, important finding was that the often-noted gender gap, in which women are more willing to take these medications (see e.g., Mitchell and Selmes 2007), was found only

among the least educated in the sample. Women, with less than a high school degree, reported higher levels of willingness to take psychiatric medications. This gendered pattern did not emerge among the high school graduates or those with a college degree or more. Women with low education may be more willing to take psychiatric medications than women with higher levels of education and men for a variety of reasons, including that their status includes more psychological distress, financial instability, and other disadvantages compared to the other two groups.

Third, we found that religious intensity, which has been tied to coping with psychological distress and better mental health (see e.g., Salsman and Carlson 2005), and socioeconomic status—i.e., income and full-time employment—only reduced willingness to use prescribed psychiatric drugs for those with a high school diploma. Similar to the argument made above, the variability in the conditions of life among high school graduates may situate religious intensity, income, and employment differently than in those groups with lower or higher education.

Despite the strengths of this study (e.g., representativeness and usage of multiple forms of mistrust), our findings are not without limitations. Other investigations would do well to explore racial and ethnic differences in the processes under exploration here. Beyond black-white differences, our data do not allow use to make meaningful comparisons of other race and ethnic groups (e.g., Asian Americans, Native Americans), whose current and historical position in the United States may contribute to differential patterns in mental health outcomes. Another limitation is that our measure of willingness to utilize psychiatric medication does not differentiate among psychiatric medications. For example, individuals may be less likely to agree to take antipsychotic drugs for symptoms of schizophrenia than antidepressants for feelings of sadness. Antipsychotics and the illnesses associated with these medicines are more highly stigmatized than those associated with antidepressants (Phelan et al. 2000; Sajatovic and Jenkins 2007). An additional limitation is that our data do not allow us to measure whether the respondent has a history of mental illness. Current or past mental illness and the experiences associated with treatment or non-treatment might certainly impact both a respondent's perceived need for medication as well as the willingness to utilize it. Finally, our study is cross-sectional. Without longitudinal data, our assertions about causality are restricted and data over time is needed to verify just how robust the impact of mistrust by education on the willingness to use psychotropics.

In conclusion, our main goal in this research was to investigate the relationships among the willingness to utilize psychiatric medication, education, and three forms of mistrust—generalized mistrust, mistrust in physicians, and mistrust in psychiatric medication. Our findings showed that for those with a college or advanced degree all three forms of mistrust reduced the willingness to utilize psychotropics. Mistrust in physicians and mistrust in psychiatric medication reduced willingness for high school graduates, and only mistrust in psychiatric medication decreased the willingness to utilize psychiatric medication for those with less than a high school education. The result that all three forms of mistrust impacted those with a college degree or more was not an artifact of mean levels of mistrust. College educated respondents had equal or lower levels of mistrust, compared to the other groups. Therefore, this study was fruitful to the degree that it shed light on specific human capital processes that contribute to educational differences in how mistrust impacts decisions to take psychiatric medication. Human capital is more than just years of education, but also proxies for structural positioning in American society, wherein the most educated have the resources, cognitive flexibility, financial resources, and social capital to have their mistrust manifest in medical decisions. Conversely, those with less education are not only

more distressed, but also may be more prone to take psychiatric medication, regardless of having equal or higher levels of mistrust compared to those with the highest education. Had we not investigated variation by education, we might have assumed that specific mistrust (e.g., mistrust in physicians) was a more powerful predictor of the willingness to utilize psychiatric drugs than generalized mistrust. However, our results verified the importance of investigating how structural positioning—available human capital in this case—impacts individual decisions about mental health treatment.

### AUTHOR NOTES

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