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Constructing Illness: How the Public in Eight Western Nations Respond to a Clinical Description of “Schizophrenia”

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Abstract

According to classic and contemporary social theory, the community is crucial to how individuals respond to the onset of health problems. Cultural response to symptoms provides the foundation for lay diagnosis; offers a gauge for marking individual and societal health literacy; and reflects the cultural embeddedness of modern medical knowledge. Using data collected between 2004 and 2007 from the Stigma in Global Context – Mental Health Study (SGC-MHS) on the recognition of schizophrenia from vignettes describing individuals meeting DSM-IV criteria, we examine the nature and correlates of lay diagnosis. Focusing on Western societies in the SGC-MHS, we ask three questions regarding problem recognition in Bulgaria (N=255), Cyprus (N=253), Germany (N=382), Hungary (N=352), Iceland (N=291), Spain (N=327), Great Britain (N=289), and the United States (N=449). What is the cross-national variation in recognition of schizophrenia as a mental illness? Is lay diagnosis associated with individuals' socio-demographic characteristics and/or their evaluation of underlying causes? Are lay diagnoses likely to shape the nature and direction of the illness career? We find lay diagnosis of “mental illness” to be high across these Western nations with some, though modest, difference across countries. Variation for the more specific diagnosis of “schizophrenia” is greater, though fairly consistent in country ordering. Lay diagnoses are shaped most consistently by attributions, inconsistently by socio-demographics, and generally associated with respondents' treatment recommendations and expected outcomes. In light of assumptions about public beliefs and knowledge that often underlie research, community efforts, clinical programs, and health policy, these findings suggest that a greater understanding of the complexities of lay diagnosis is warranted.

Keywords

mental illness; schizophrenia; culture; public attitudes; help-seeking; cross-national research

Introduction

Diagnosis is a key tool in medicine. It allows physicians to understand symptoms as a “disease,” and consequently to shape treatment plans for those under their care. On a theoretical level, the power to classify and diagnose health problem into formally designated

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categories represents a mechanism whereby expert knowledge is legitimated and social control exerted (Zola, 1972). However, medical diagnoses have an equally important lay counterpart. Responses to illness are first constructed in the community by individuals experiencing symptoms as well as by those around them. In fact, most symptoms individuals experience are evaluated and dealt with outside the formal health care system (Dean, 1986; Stoller et al., 1993). Lay diagnoses, embedded in a broader social context, allow individuals to assign meaning to and make sense of deviations from usual health status in themselves or others (Freidson, 1970; Olafsdottir & Pescosolido, 2009; Pescosolido, 1992; 2011). The lay counterpart represents a first step in whether individuals cast “life’s experiences as medical in nature” (Jutel, 2010: 1084).

Attention to broader social issues results in a focus on the cultural context of mental illness. The debate of the impact of culture has a long-standing tradition within the social sciences (Kleinman, 1977). On the one hand, some argue that attitudes toward help-seeking are largely or even exclusively based on need; and in fact, large-scale quantitative studies have frequently failed to capture cultural impact of attitudes toward mental illness (Pescosolido & Olafsdottir, 2010). On the other hand, specific cross-cultural accounts continue to show the profound impact of culture on individual responses to health and illness (Kirmayer, 2001; Kleinman and Good, 1985; Marmanidis et al., 1994; Papadopoulos et al., 2004; Silveira and Allebeck, 2001). As Rogers and Pilgrim (2005) point out, for example, emotional distress is observed across multiple cultural contexts, yet interpretations and responses vary. It is precisely this cross-cultural variation that we are interested in examining. Though cross-cultural research on lay understandings of illness frequently relies on qualitative data embedded within one context, we argue that carefully constructed surveys across multiple contexts can provide additional insights into cultural understandings of mental illness.

The Stigma in Global Context – Mental Health Study (SGC – MHS) provides a unique opportunity to examine lay diagnosis, specifically, public recognition of schizophrenia (www.indiana.edu/~sgcmhs/index.htm). We focus on eight Western countries: Bulgaria, Cyprus, Germany, Hungary, Iceland, Spain, Great Britain, and the United States. Based on nationally representative samples and standards set by the International Social Survey Program (www.issp.org), the SGC-MHS collected data in face-to-face interviews designed to investigate the public’s understanding of and response to mental health problems. Importantly, rather than providing respondents with a stimuli labeling a condition as a general mental illness or a specific category like schizophrenia, they are given a description of symptoms and asked to interpret the situation, assigning meaning to what (if anything) is wrong with the individual in the vignette.

Here we focus on one “case,” schizophrenia, and a subset of SGC-MHS countries, limiting our analysis to respondents residing in advanced, industrialized nations. While much research on cross-cultural psychiatry has focused on differences between the developed and developing world, we argue that diagnosis categories or responses cannot be taken for granted within Western contexts (Kleinman, 1977). Relatively little is known about possible variation among countries that, at least in theory, are thought to share similar notions about mental illness. A cross-national evaluation of countries that stand in relatively similar positions with regard to the rise, dissemination, and nosology of allopathic medicine represent a finer-grained understanding of the role of culture in shaping public attitudes toward issues of health, illness, and healing. While our key interest is in cultural differences, we acknowledge that there are multiple other important differences between the countries (e.g. political and economic) that shape public responses. Nevertheless, we argue that public attitudes are able to capture the overarching cultural climate surrounding lay diagnosis of schizophrenia across the eight countries, although our findings are embedded in the broader social context of each country. In a further attempt to capture cultural differences regarding

similar sets of behavior, we limit our analysis to schizophrenia. We examine three questions: 1) Is there cross-national variation in lay diagnosis of a set of behaviors that meet Western psychiatry's diagnosis of schizophrenia across the eight countries; 2) What are the key determinants of lay diagnosis across the eight countries; and 3) What are the consequences of a "correct" diagnosis of "mental illness" and "schizophrenia" across the eight countries?

Our paper proceeds in five steps. First, we review approaches to understanding lay diagnoses, its correlates and consequences. Second, the SGC-MHS data on the public response to the schizophrenia vignette, as a mental illness, in general, and schizophrenia, in particular, are presented. Third, we evaluate factors associated with lay diagnoses. Fourth, we consider whether the label assigned to the situation is associated with recommendations for different informal and formal sources of help. Finally, implications of our findings for socio-medical and public health research, policies and practices are discussed.

Theoretical Background

Framing Lay Diagnosis

When individuals are confronted with an illness, they do not enter into an exclusive relationship with their physician. As Jutel (2010) notes, diagnosis takes place at a salient juncture between illness and disease. It also takes place at the interface of community and treatment systems (Pescosolido, 2006). Symptoms individuals experience are, most often, evaluated and treated outside of the formal medical system before any formal diagnostic label is applied.

These community-based processes have been conceptualized in two ways. Some have argued that help-seeking outside of the formal sector represents delays in treatment (Dean, 1986), with the potential consequences of prolonged suffering (Kart, 1981), higher cost or even death (Haug et al., 1989). Alternately, researchers have shown that self-care and informal practices are often helpful in alleviating symptoms, can reduce the duration of illness and are rarely dangerous (Grimsom & Siem, 1984). However, regardless of whether lay diagnosis and treatment is complimentary or potentially harmful to formal medical care, the fact remains that most people rely on resources available in the lay community before ever entering formal treatment (Stoller et al., 1993).

This point is clearly reflected by social scientists interested in responses to illness. All major theories on help-seeking, service utilization, and health behavior change begin with a clearly specified role for the lay construction of illness. From Parson's (1951) rights and responsibilities of the sick role, to Freidson's (1970) conceptualization of the lay referral system, to Pescosolido's (1991; 2011) theory of the critical role of social networks, lay diagnosis represents a key initial point in an illness career. Further, in Prochaska's Trans-theoretical Model (1979), the ability to change health and illness behavior (e.g., protected sex, smoking cessation, weight loss) depends on individuals' problem recognition and cannot occur without it. In addition, empirical research has shown that understanding the lay explanations of the causes, effects, and appropriate sources of help improves the communication between health providers and patients (Cohen et al., 1994; Gray, 1995; Gregg & Curry, 1994; Kleinman, 1980; Okello & Ekblad, 2006).

Thus, understanding lay beliefs is important for at least two reasons. First, they have a clear role in guiding individuals toward different formal and informal sources of help (Olafsdottir & Pescosolido, 2009). Individuals are embedded in a community that provides them with general ideas of what may be wrong as well as specific insights from family and/or friends who may have a wide array of opinions of what may be happening. Early on, Freidson (1960) pointed out that researchers over-emphasized the relationships among professionals

and between professionals and the state, leaving the relationship between doctors and their patients relatively unexamined. More recent work emphasizes the importance of mental health literacy – the ability to gain access to, understand, and use information in ways which promote and maintain good mental health (Jorm et al., 1997). Here, research reveals that the public has low levels of recognition of depression and schizophrenia across Western nations including the U.S. (Link et al., 1999), Germany (Gaebel et al., 2002), Switzerland (Lauer et al., 2000) and Australia (Jorm et al., 2005a). However, explicit cross-national comparisons are rare. Jorm and colleagues (2005b) compared public beliefs in Australia and Japan, finding that the Japanese are more reluctant to use psychiatric labels, and while they generally believe in treatment, they are less optimistic about recovery. In contrast, Australians are more positive about the benefits of professional help, but strongly prefer lifestyle interventions over psychiatric medication.

Second, lay beliefs may vary systematically from professional scripts and categorizations of physical and mental illness in advanced, industrialized nations. For example, Gregg and Curry (1994) described how cancer beliefs held by African American women were significantly different than those of physicians, specifically regarding the effectiveness of treatment. Similarly, despite clinicians' beliefs that public stigma is the main reason for patients being unwilling to disclose emotional problems to their physicians, a more recent study in Wales suggested that individuals tended to view the condition as a social problem, an inappropriate reason to seek out help, and not amenable to effective treatment (Prior et al., 2003).

As Kokanovik (2011) notes, multiple factors impact our concepts of mental health and illness, including traditional cultural philosophies, medical discourse, popular culture, and the lived experiences of individuals experiencing the illness. Responses to illness, then, must be understood in the context of at least three distinct, yet inter-related parts. They are shaped by the medical view of what constitutes a problem, the individual experience of the illness, and cultural meanings in the community. Culture not only shapes responses to illness, but shapes our explanation of illness and what, in fact, constitutes an illness.

Attempting to use the pre-existing categories of illness from contemporary psychiatry masks the impact of culture on responses to illness (Kleinman, 1977). Further, reducing cultural differences in cross-cultural psychiatry to those between the developed and developing world downplays the profound impact of culture on shaping understandings and responses to mental illness within countries that share similar notions about mental health. While Western-based research has most frequently considered how culture plays a role in help-seeking among various racial and ethnic minority groups (Alegría et al., 2004; Alegría et al., 2002; Takeuchi et al., 1999; Vera et al. 1998), all individuals hold and access cultural beliefs to interpret and respond to symptoms (Olafsdottir & Pescosolido, 2009). As Prior and colleagues (2003: 2198) note, “we need to be aware that people in the West are as subject to cultural influences as are people in the Orient.” For example, the U.S. media is more likely to portray mental illness as an individual problem requiring individual solutions, compared to Icelandic media, which tends to describe mental illness as a social problem requiring social solutions (Olafsdottir, 2011). Although a limited comparison, it illustrates that the overarching cultural logic about mental illness can be quite different across two nations which share a similar overarching medical landscape.

We use these insights to frame our first set of questions: *Is there cross-national variation in public constructions of a set of symptoms matching contemporary psychiatric criteria for schizophrenia, both in terms of a general recognition as a “mental illness” and a specific recognition of the condition as “schizophrenia?”*

Capturing Culture: Social Location and Cultural Beliefs

Focusing on the nature of lay diagnosis in terms of individuals' "own logic, knowledge and beliefs" is not divorced from "the social context and circumstance in which people carry out their daily activities" (Calnan, 1988: 929). Individuals in the community construct their understandings of emotions in relation to their life history and social situations (Pilgrim & Bentall, 1999). Our attempt to understand influences on lay diagnosis is guided by the idea that factors can be local and global, as well as social, cultural and technological (Nettleton, 2007). Individuals assign their own labels to the problem (e.g., mental illness and/or schizophrenia), the underlying cause, and appropriate actions. In order to understand the factors that impact general recognition of the case as a mental illness and the specific recognition as schizophrenia, we focus on two sets of explanation: 1) characteristics of the respondent and person being evaluated; and 2) the cultural beliefs individuals hold about the condition.

Prior research focusing on the impact of social location has not provided consistent results. In some cases, women are more likely to report greater knowledge about health-related issues, and to correctly identify depression (but not psychosis), and translate this into a higher use of services (Kessler et al., 1981). Yet, even for individuals described with serious depressive symptoms, neither sex, age, education, income nor insurance coverage were associated with problem recognition in some studies (Yokopenic et al., 1983). As Littell and Girvin (2006) conclude for recognition of child abuse, only a small portion of variation could be accounted for by individual and case characteristics. Perhaps the most consistent influence on individuals' lay diagnoses is experience, whether their own or that of others with similar health situations (e.g., Furnham & Wardley, 1991; Gum et al., 2009; Yokopenic et al., 1983). In fact, families with a history of psychotic illness were more likely to recognize a problem for a family member even *prior* to the onset of manifest psychotic symptoms (Norman et al., 2007).

Without dismissing the potential impact of social location characteristics, it appears that a focus on whole cultural systems of values, expectations, and beliefs may provide greater insight (Olafsdottir & Pescosolido, 2009). This point finds resonance with Gieryn's (1999) argument that it is impossible to capture differences in culture exclusively with social location. Instead, the beliefs, values and attitudes that individuals hold about the causes of mental illness are likely to shape their understanding of any particular situation. For example, past research makes a strong case for the lay assessment of symptom severity – the more serious the symptoms are perceived by individuals, the more likely a lay diagnosis will translate into problem recognition and align with medical constructions (Gum et al., 2009). In addition, causal attributions thought to underlie scenarios are likely to trigger different responses. The two dominant beliefs about the causes of mental illness in advanced, industrialized nations focus on biological and social sources. While individuals tend to endorse both social and biological causes for mental health problems (Estroff et al, 1991; Furnham & Henley, 1988; Kuyken et al., 1992), only causal biological attributions are likely to have a distinct influence on public attitudes and recommendations (Angermeyer et al., 1999; Furnham & Henley, 1988; Fosu, 1989).

At this point in time, it is premature to dismiss examination of the potential influences of social location. Yet, we expect that the cultural values that respondents hold are more likely to impact recognition than socio-demographic characteristics. In sum, we ask: *Is lay diagnosis associated with individuals' socio-demographic characteristics, their previous experience with mental illness, and/or the cultural values they harbor regarding mental illness?*

The Consequences of Lay Diagnosis

Physicians and other mental health professionals (e.g., psychologists, social workers) hold the power to define appropriate responses to schizophrenia, but “consulting status” (Freidson, 1970), granted by the public, is critical. Current realities only increase the importance of understanding social processes in the community. As Wilkinson (1994) notes, all advanced, industrialized nations have experienced an epidemiological transition where the prevalence of acute, infectious illnesses has been replaced, to a large extent, by chronic physical and mental health problems. These disorders require more active participation by individuals and make the doctor-patient relationship more complex (Lutfey & Freese, 2005). Further, the movement to community-based care, the shrinking of hospital stays, and the resurgence of alternative etiological and healing systems all increase the visible role of those outside of the canopy of medicine (Pescosolido & Kronenfeld, 1995). According to Dixon-Woods and colleagues (2002), community participation and individual preferences are increasingly valued in shaping and evaluating clinical decision-making (also Bendelow & Williams, 1996). Finally, as Conrad (2005), among others, argues that “patients” are increasingly behaving like “consumers,” are less likely to accept what the doctor orders, and draw independent “advice” from internet information sites and interactive discussions (Gray et al., 2004; Nettleton et al., 2005; Pandey et al., 2003).

Consequently, which solutions the public embraces forms a critical part of pressing concerns of medicine and public health – low utilization rates, unmet need, and delay in help-seeking and poor outcomes. The process of assigning meaning and labels has been repeatedly shown to have important consequences for individuals living with health problems and existing research tends to support the hypothesis that lay diagnoses matter (Link et al., 1991; Markowitz, 2001; Martin et al., 2000). Most salient among these is recognition of need (Gum et al., 2009). For example, among Chinese speaking individuals in Australia with anxiety disorders, the most frequently endorsed reason for seeking out formal services was problem recognition (Ho et al., 2008). Mismatches between “lay” and “expert” diagnoses have been associated with the length of untreated psychosis or other mental health problems (Bergner et al., 2008) and for postpartum hemorrhage documented in rural India (Sibley et al., 2005). While not fully consistent, this research suggests the need to consider controls. Unmet need appears to be greatest in traditionally underserved groups including the elderly, racial-ethnic minorities, and those with low incomes (Wang et al., 2005).

As a final research question, then, we ask: *Do lay diagnoses shape the nature and direction of the illness career, such as recommendations for formal and informal sources of help, as well as beliefs in the effectiveness of treatment?*

Why Focus on Schizophrenia?

According to the DSM-IV, schizophrenia is a class of disorders that involve both positive (e.g., hallucinations, delusions) and negative (e.g., loss of affect, speech) symptoms. Along with bipolar disorder and major depression, it is classified as one of the three most serious mental illnesses. Initial stigmatizing beliefs from medical and psychiatric professions held that schizophrenia was caused by child rearing (particularly the notion of the schizophrenogenic or “refrigerator” mother) or that the inevitable course was degenerative. These expert assessments have been replaced by current notions that target genetic or epigenetic causation, the possibility of “recovery” and the critical role of early identification and pharmaceutical intervention (Farooq et al., 2009). However, despite efforts of the mental health disciplines and advocacy communities, the use of services for those with symptoms of schizophrenia and other serious mental health problems is surprisingly low. For example, in New Zealand, considered to be a very progressive nation regarding mental health literacy, stigma reduction, and innovative services, the World Mental Health Survey

(WMHS) found that only 58% of individuals with symptoms of serious mental disorder had visited *any* health care service (only 25% of Pacific people; Foliaki et al., 2006). In the U.S., the National Co-Morbidity Study documented that 41% of those with clear need received some treatment (Wang et al., 2005).

The co-occurrence of strong professional recommendations and low levels of service use make schizophrenia an ideal case for examining lay diagnoses. From the psychiatric point of view, schizophrenia represents one of the most serious mental illnesses that require early identification and treatment. Local, national and global efforts have been mounted to increase public awareness, improve services and utilization of those services, and reduce the prejudice and discrimination associated with it (Sartorius & Schulze, 2005). However, there are no “signs,” only “symptoms,” which are reported by individuals and subject to cultural interpretation.

Data and Methods

Data

We use data from the Stigma in Global Context – Mental Health Study (SGC - MHS), the first theoretically and methodologically coordinated cross-national study designed to evaluate public attitudes, beliefs, and predispositions toward mental illness. To help increase comparability, the recruitment and fielding platform for the SGC-MHS drew survey organizations from *The International Social Survey Program* (ISSP), an on-going, annual research program that brings together an international cadre of leading social science survey researchers with a history of cross-national collaboration, comprehensive training for face-to-face interviewers, and elaborated procedures for ensuring data comparability. Ethics approval was granted by Indiana University IRB.

Not surprisingly, researchers have pointed out the problems inherent in capturing meaning in surveys across contexts (Lutz, 1985; Werner & Campell, 1970; Kokanovic, 2011), making simple back-translations somewhat problematic. Consequently, in addition to the standard ISSP translation protocol (back translation), an in-house “cultural” review recruited a native speaker who provided an oral translation and interpretation of the full instrument (including instructions). These three to six hour sessions were led by the SGC-MHS P.I.; all questions and suggestions were recorded by item and sent to the relevant ISSP team; and negotiations concluded when both the P.I. and the country team agreed on each point. Vignettes were taken from the U.S. General Social Survey in 1996 (Link et al., 1999) and revised for cross-cultural applicability during an initial meeting in Madrid which included representatives of all country teams, and a cross-cultural psychiatrist who had been central to the WHO study (Hopper et al., 2007).

All country samples were based on multi-stage sampling protocols and were nationally representative. Data collection spanned three years, with Spain fielding in 2004; Cyprus, Germany, Hungary and Bulgaria in 2005; the United States in 2006; Iceland in 2006–2007; and Great Britain in 2007. Eligible respondents were non-institutionalized adults (i.e., eighteen years of age or older). Respondents were selected and recruited in a way most appropriate for each country (for example, some nations have national registries while others do not), using methods that conform to ISSP standards. In addition, all sampling decisions and strategies were approved by the SGC-MHS research team. Although the ISSP allows multiple modes of data collection, the SGC-MHS required countries to administer data in face-to-face surveys. Within each nation, sample weights were computed to offset potential biases; however, analyses of the weighted and unweighted data revealed few systematic differences. We use the unweighted data here to increase interpretability. Response rates for our countries were following: 75.4% for Bulgaria, 74.6% for Cyprus, 63.2% for Germany,

58.8% for Hungary, 70.8% for Iceland, 98.4% for Spain, 50.6% for Great Britain, and 67.3% for the United States.

Here, we focus only on those respondents who randomly received the schizophrenia vignette, one third of respondents. Sample size, with cases with missing values on the independent variables deleted, are 255 for Bulgaria, 253 for Cyprus, 382 for Germany, 352 for Hungary, 291 for Iceland, 327 for Spain, 289 for Great Britain, and 449 for the United States. In the multivariate analysis, we also delete cases with missing values on the dependent variable (e.g., Table 2 deletes respondents who did not answer the question on whether it is mental illness; Table 3 does so for the schizophrenia question). Sample sizes are reported in respective tables (with the exception of Table 4, full results for each analysis available upon request). Due to the randomization procedure, the data represent nationally representative samples of each nation but the focus on a subsample will underestimate statistical significance.

Measures and Analysis

The Dependent Variables

Lay diagnoses were elicited using a vignette meeting DSM-IV criteria for schizophrenia with no clues as to what or whether “a problem” was being described. Within vignettes, the vignette person’s race/ethnicity and gender were randomly varied. As noted above, the SGC-MHS schizophrenia vignette was based on a 1996 U.S. national study of stigma, but reviewed and revised for cultural, medical, and survey accuracy (Pescosolido et al., 2008). The vignette description for a white male is shown below (the names and the race/ethnicity was randomly varied).

John is a white man. Up until a year ago, life was pretty okay for John. But then, things started to change. He thought that people around him were making disapproving comments, and talking behind his back. John was convinced that people were spying on him and that they could hear what he was thinking. John lost his drive to participate in his usual work and family activities and retreated to his home, eventually spending most of his day in his room. John became so preoccupied with what he was thinking that he skipped meals and stopped bathing regularly. At night, when everyone else was sleeping, he was walking back and forth in his room. John was hearing voices even though no one else was around. These voices told him what to do and what to think. He has been living this way for six months.

Two dependent variables tap into lay diagnosis of schizophrenia. The first examines whether respondents label the person as having a mental illness (“How likely do you think that [NAME] is experiencing a mental illness?” response categories very likely; not very likely; somewhat likely; not at all likely; with more likely recoded to a higher value). The first two categories are collapsed for descriptive results; original coding is used in multivariate analyses. The second examines the specific label respondents assign to the scenario. They were asked whether they thought the situation was caused by five different options, including schizophrenia (other options were depression, asthma, stress, and other). A binary variable codes respondents who correctly identified schizophrenia as 1; otherwise 0.

The potential influence of lay diagnoses is examined with a question assessing whether respondents believe the situation would improve with treatment (response categories recoded from (1) not at all likely to (4) very likely); and six variables asking about the importance of seeking various formal and informal sources of help (doctors, psychiatrists, counselors, family, friends, religious leader). We use the importance of consulting with each

source (response categories range from 1–10, with higher values indicating greater importance).

Independent Variables

Three sets of independent variables tap characteristics of the vignette person. Two characterize the vignette person (male/female and the key racial/ethnic divide based on country team input in concert with the SGC-MHS team; e.g., blacks in the U.S., Turks in Germany). Six variables measure respondent characteristics. Age is a continuous variable measured in years. Gender, college education and work status are binary variables (1 = female or college or in the labor force). Two variables are combined to create a measure of mental health contact – whether respondents know someone who has experienced mental illness and whether respondents themselves have experienced mental illness. The contact variable is coded 0 if the respondent answers negative to both; 1 if the respondent knows someone but has not experienced mental illness; 2 if the respondent has experienced mental illness, but does not know anybody else who has; and 3 if the respondent has experienced mental illness and knows somebody else who has.

The responses to the severity question, “How serious do you think [NAME]’s situation is?” are recoded to range from 1 (Not at all serious) to 4 (Very serious). Attributions for the vignette case are measured with four questions: “How likely do you think that [NAME]’S condition is caused by a brain disease; genetics; the way the individual was raised; and stress. All questions have four recoded response categories, ranging from 1 (Not at all likely) to 4 (Very likely). The descriptive statistics for each variable are provided in Table 1.

Analytical Strategy

Simple descriptive statistics and graphics are used to display lay diagnoses by country. We match different types of regression models to the level of measurement of the dependent variables. Ordinal logit regression provides estimates in models for labeling schizophrenia as mental illness, believing that the condition will improve with treatment, and beliefs in the effectiveness of treatment. This choice is particularly appropriate for cross-national comparison because it does not assume equal spacing of response categories, homoscedasticity, normality, or linearity of functional form (Long, 1997). Binary logit regression is employed in the analysis of lay diagnoses of schizophrenia. Finally, given the 1–10 coding of respondents’ assessment of the importance of sources of help, OLS-regression provides our estimates.

Results

Cross-National Variation in the Labeling and Recognition of Schizophrenia

Figures 1 and 2 provide data on lay diagnoses of the case scenario meeting DSM-IV criteria for schizophrenia. Figure 1 indicates some, but not great, variation across the eight Western nations (ranging from 79.7% responding very likely or somewhat likely a “mental illness” in Spain to 95.9% in Cyprus).

Figure 2 reveals much greater cross-national variation and lower lay recognition regarding “schizophrenia.” Respondent lay diagnoses in Cyprus are highest (68.2%) followed by approximately 47% in the U.S. and 40% in Spain. In other countries, respondents’ assessments are lower (38% in Great Britain, 35% in Iceland, approximately 31% in Bulgaria, roughly 22% in Germany). Respondents in Hungary are least likely to offer a lay diagnosis of schizophrenia (15.7%).

Correlates of Lay Diagnoses

Table 2 presents results of an ordered logit regression analysis of lay diagnosis of “mental illness” in each country and reveals both general and unique patterns. Characteristics of the vignette person do not play a consistent nor critical role across countries. For example, gender of the vignette character matters only in Great Britain – those who receive the female character are more likely to label the condition as “mental illness.” Gender of the respondent is significant in only two countries. However, in Great Britain, women are more likely to assign the label of mental illness; they are significantly less likely to do so in Bulgaria. Whether the character is a racial/ethnic minority is significant in Cyprus, Spain and the U.S. Again, however, the directions of effects are not consistent (i.e., in Cyprus, less likely to a member of a racial/ethnic minority as having “mental illness”; more likely in Spain and the U.S.). Similarly, respondent age is significant only in Iceland, where older respondents are less likely to label the situation as mental illness. Both marriage (Spain) and college education (U.S.) are only significant in one context. Finally, contact with mental illness only increases lay recognition of mental illness in the United States and Great Britain. Overall, respondents’ and vignette persons’ characteristics appear to play a minor role in labeling the condition as “mental illness,” and, the findings are inconsistent. Given the number of coefficients estimated, we are reluctant to draw too heavily on the implications of these scattered sociodemographic effects.

Lay attributions appear to play a greater role in assigning a mental illness label across countries. Evaluated seriousness increases the likelihood of assigning this label in all countries but Iceland. Believing that the scenario is caused by a “brain disease” also increases the likelihood of a lay diagnosis of mental illness in all countries but Cyprus. Other attributions matter less consistently, but still do so across a number of countries. Reporting that the scenario is caused by genetics increases the likelihood of a mental illness label in Germany, Hungary, Iceland, Spain, and the United States. A social attribution, on the way the individual was raised, decreases the likelihood of a lay diagnosis of mental illness in Germany, Hungary, Iceland, and the U.S. Finally, citing stress as an underlying cause decreases the likelihood of a label in Cyprus but has the opposite effect in Hungary and Spain. Overall, cultural values associated with mental illness play some role in all countries with the most consistent effect of medical or biological attribution associated with assigning the mental illness label.

Table 3 reports results from binary logit regressions of the more specific lay diagnosis of “schizophrenia” across countries. Ironically, given the greater cross-cultural variation in lay diagnosis, the results indicate that vignette and respondent characteristics play even less of a role here. Of all the possibilities, only three relationships are significant (i.e., men in Hungary, labor force participants in Spain, those with greater contact in the U.S.). Again, however, cultural values have more consistent effects. Perceived seriousness has a significant, positive relationship on lay diagnosis in five countries. Respondents who evaluate the condition as serious are also more likely to identify a “schizophrenia” diagnosis in Bulgaria, Cyprus, Spain, Great Britain, and the U.S. Finally, respondents who attribute the underlying cause to neurobiological explanations are significantly more likely to assign a schizophrenia label. In all countries but Cyprus, brain disease has a positive association, while genetic attributions do so in all countries but the U.S, where it approaches significance for a two-tailed test. Social attributions, such as child rearing, reduce recognition in most countries (Bulgaria, Germany, Iceland, Great Britain, and the U.S.), but increase it in Cyprus. Similarly, those who cite stress as the cause (Cyprus, Germany, Great Britain, and the U.S.) are also less likely to align their diagnoses with psychiatric classification.

The Influence of Lay Diagnoses

Table 4 reports the consequences of lay diagnoses of “mental illness” and “schizophrenia” on general beliefs in treatment efficacy, as well as recommendations for six sources of formal and informal help, controlling for all factors included above. Lay diagnosis of “mental illness” has a significant influence on reporting that the condition will improve with medical treatment in Hungary, Iceland and Great Britain. However, lay diagnosis of “schizophrenia” is associated with more *pessimistic* views of medical efficacy in four countries (Cyprus, Germany, Hungary and Spain).

A lay diagnosis of “mental illness” has an inconsistent relationship with respondents’ views of the importance of consulting “medical doctors.” The relationship is negative in Cyprus, but positive in Germany and Hungary. More consistent effects of lay diagnoses of “mental illness” are found for the importance of seeking psychiatric help. In all countries, but Cyprus, the influence is positive. A similar pattern is observed for viewing “counselors” as important in all countries but Cyprus and Hungary. Further, assigning a mental illness label matters less for recommending the help of informal sources, while endorsing the scenario as a “mental illness” decreases the likelihood of suggesting family in Cyprus and religious leaders in Spain. However, it increases the likelihood of suggesting religious leader in Hungary.

Lay diagnoses of “schizophrenia” appear to matter less, overall, than the recognition of “mental illness” for treatment recommendations. There is some evidence that assigning a lay diagnosis of schizophrenia steers respondents toward endorsing the mental health system. Those who see the scenario as “schizophrenia” in Cyprus and Spain view the help of psychiatrists as more important than those who do not (also for counselors in Cyprus and the U.S.). This appears to matter *more* regarding informal sources, where it lowers support for these options (e.g., decreasing support for family in Hungary and Great Britain, for friends in Germany and Great Britain, and for religious leaders in Hungary and Great Britain).

In sum, these findings suggest that respondents across our eight nations appear to translate a lay diagnosis of “mental illness” into prescriptions toward use of the specialty mental health system, but this has little influence, either way, on informal sources of help. The results for lay diagnoses of “schizophrenia” are less clear but tend to reflect a negative assessment of the potential utility of either the formal or informal health care systems.

Discussion and Conclusion

Lay diagnoses matter for at least three reasons. *First*, from a medical and public health perspective, when lay diagnoses do not align with expert ones, the failure to seek health care can lead to long delays which, in turn, produce prolonged suffering, higher costs to individuals and societies, and even premature death. Lay diagnoses hold the potential to impact diagnostic categories themselves (Conrad, 2005). *Second*, from an indigenous system perspective, lay diagnoses lead to behaviors which are rarely life-threatening and can alleviate symptoms, reduce the duration of illness, and activate positive health behaviors. *Third*, from a theoretical point of view, the public response to scenarios that match formal diagnoses of allopathic medical systems tells us about the medicalization of culture, the nature of support for formal and informal healing options, and cleavages in the adoption of dominant, Western belief systems. The fact remains that people rely most often on their own or others’ assessments of the onset of symptoms. Based on those evaluations, they rely on community resources before ever considering whether they will seek out formal medical care (Stoller et al., 1993). As such, lay diagnoses reveal important information about cultural systems, particularly judgments on cultural beliefs regarding social problems and the potential response pathways that those cultural beliefs lay out.

Here, we describe how individuals within and across eight Western countries responded to a scenario which met criteria for a DSM-IV diagnosis of schizophrenia, one of the most serious of the mental illnesses. For our set of questions, three key findings emerge. *First*, a majority of respondents across our eight advanced industrialized nations is able to recognize schizophrenia as a mental illness, but much less likely to be able to provide the specific label of schizophrenia. It appears that the description allows the public to recognize that something is wrong and that it is related to mental health problems, but the overall health literacy across the countries has not reached a point where a specific lay diagnosis accompanies the symptom description. *Second*, recognition is not strongly associated with who people are (the evaluator or the person being evaluated), but appears to be embedded within their larger cultural beliefs about mental illness. Across the countries, we observe a strong pattern where those who attribute the condition to medical or biological causes are more likely to recognize the description as a mental illness in general or schizophrenia in particular. We also find a more inconsistent tendency that a belief in social causes decreases the likelihood of lay recognition. Consequently, it appears that lay diagnosis corresponding to a medical view is embedded within a larger medical context endorsed by the individual. Conversely, individuals who appear to take a more social approach to mental illness are less likely to endorse a medical label of the condition. *Third*, the public across these countries appears relatively optimistic regarding mental illness, but less so for schizophrenia. In particular, we find that respondents see a utility in various mental health providers when the problem is mental illness, but these relationships only rarely reappear when the schizophrenia label is assigned. This indicates that public campaigns regarding mental illness recovery have been somewhat successful in general, but that lack of hope may still surround the most serious diagnosis across multiple developed countries.

What do these findings, and in particular, the differential appropriation of “mental illness” and “schizophrenia” diagnoses among the public imply? Do they reference differing degrees of health literacy? A resistance to medical constructions of reality (Jutel, 2009)? The fear of the stigma attached to a more specific diagnostic label (Franz et al., 2010)? More research may be able to separate out these possibilities. In all likelihood, however, delving into cultural meanings of illness and the authority of medicine will lead us to a more nuanced understanding of social, political, economic, and cultural systems. Our findings suggest that even as problem recognition matters, the usual policy response (i.e., to improve education about symptoms) (Ho et al., 2008) will likely have both expected and latent effects on lay diagnosis and advice.

Of course, our study has limitations. While careful attention was taken in the SGC-MHS to develop culturally appropriate and comparable surveys, other cultural differences, not considered, could matter. The findings do provide a broad overview of public attitudes toward mental illness in these countries and do offer initial finding on how social location and cultural values shape lay diagnoses. However, we reiterate our concern about interpretations on fine-grained cultural differences. In addition, while we strategically limited our countries to developed SGC-countries to decrease differences in health care systems and medical views, there still is a wide array of political, economic, and social differences across the countries. Finally, our analysis here is limited to one mental illness, schizophrenia. Results may differ for other mental health problems.

In the end, however, our findings support a critical conclusion of other recent research. A more complex approach to understanding the role of community-based culture and their influence on health and health care is essential to the understanding of unmet need, delay, and low utilization rates that trouble providers and policymakers. As Marie et al. (2004) conclude in New Zealand, the “assumed” relationship between “categorical ethnicity” (e.g., in their case, Maori/non-Maori) and mental health literacy that undergirds public social

policies appear to be fundamentally misdirected. For major depression, most majority and minority-identified individuals in their study could correctly identify the “disorder” from a vignette. However, the response to a “correct” lay diagnosis did not necessarily translate into similar response pathways. Our findings lead to a similar, but more general conclusion.

Continuing to rely on assumptions, rather than empirical evidence, about what individuals in the community think, what information they have, and how they will interpret and use that information can only produce weak efforts in community and institutional initiatives to improve the health of the population (Olafsdottir & Pescosolido, 2009). While we may disagree with Calnan’s early assessment (1988) that our knowledge gaps result from using particular methodological approaches, we agree with him and others that creative, complex and conceptually driven research on culture will assist us in understanding the community, the medical system, and most importantly, the interface between the two.

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Figure 1.
Percentage of Respondents in Each Country Who Identify the Schizophrenia Vignette as
“Mental Illness,” Stigma in Global Context – Mental Health Study.

Figure 2.
Percentage of Respondents in Each Country who Identify the Schizophrenia Vignette as
“Schizophrenia,” Stigma in Global Context – Mental Health Study.

Table 1
Descriptive Statistics for Independent Variables: Stigma in Global Context – Mental Health Study (SGC-MHS).

	Bulgaria	Cyprus	Germany	Hungary	Iceland	Spain	G. B.	U.S.
<i>Vignette Characteristics</i>								
Female	.48 (.50)	.50 (.50)	.53 (.50)	.51 (.50)	.49 (.50)	.47 (.50)	.55 (.50)	.51 (.50)
Outgroup	.48 (.50)	.50 (.50)	.47 (.50)	.49 (.50)	.50 (.50)	.47 (.50)	.52 (.50)	.53 (.50)
<i>Respondent Characteristics</i>								
Age	50.91 (16.85)	44.51 (14.57)	48.20 (16.76)	47.42 (17.66)	42.43 (16.32)	42.98 (17.07)	48.97 (19.13)	47.21 (16.97)
Female	.57 (.50)	.49 (.50)	.52 (.50)	.58 (.49)	.46 (.50)	.49 (.50)	.58 (.49)	.52 (.50)
Married	.64 (.48)	.74 (.44)	.56 (.50)	.56 (.50)	.50 (.50)	.55 (.50)	.42 (.49)	.51 (.50)
College Education	.18 (.39)	.15 (.35)	.07 (.26)	.05 (.21)	.23 (.42)	.09 (.29)	.21 (.41)	.27 (.44)
In Labor Force	.49 (.50)	.63 (.48)	.51 (.50)	.44 (.50)	.71 (.45)	.51 (.50)	.54 (.50)	.65 (.78)
Mental Health Contact	.50 (.75)	.18 (.46)	.74 (.90)	.63 (.85)	.98 (.85)	.46 (.72)	.93 (.94)	1.01 (.93)
<i>Attributions</i>								
Seriousness	3.57 (.75)	3.85 (.42)	3.65 (.58)	3.43 (.73)	3.77 (.44)	3.46 (.70)	3.71 (.57)	3.86 (.41)
Brain Disease	2.92 (1.04)	2.91 (.90)	2.60 (1.04)	2.35 (.96)	3.18 (.81)	2.87 (.98)	3.06 (.87)	3.17 (.74)
Genetics	2.69 (1.00)	3.04 (.79)	2.26 (.94)	2.37 (.91)	2.72 (.76)	2.34 (.99)	2.65 (.81)	2.94 (.76)
Way Raised	2.08 (.98)	2.30 (.92)	1.84 (.88)	2.02 (.89)	2.05 (.81)	2.04 (.90)	2.24 (.88)	2.20 (.90)
Stressful Circumstances	3.58 (.60)	3.08 (.86)	2.60 (.92)	3.21 (.72)	2.92 (.73)	2.90 (.83)	3.21 (.69)	3.12 (.73)
N	255	253	382	352	291	327	289	449

Note: Numbers show the mean for each variable and numbers in parenthesis show standard deviations.

Table 2

Ordered Logit Regression of Lay Diagnoses of Vignette Case as "Mental Illness" on Selected Independent Variables: Sigma in Global Context – Mental Health Study (SGC-MHS).

	Bulgaria	Cyprus	Germany	Hungary	Iceland	Spain	G. B.	U.S.
<i>Vignette Characteristics</i>								
Female	-.25 (.93)	.29 (1.04)	.24 (1.14)	-.20 (.92)	-.17 (.68)	.32 (1.40)	.69* (2.44)	-.04 (.19)
Outgroup	-.15 (.57)	-.73** (2.61)	-.21 (1.00)	.01 (.05)	-.35 (1.38)	.49* (2.14)	-.17 (.61)	.62** (2.82)
<i>Respondent Characteristics</i>								
Age	.02 (1.67)	.01 (.63)	-.01 (1.25)	.00 (.59)	-.04** (4.07)	.01 (1.65)	-.01 (1.42)	-.01 (.87)
Female	-.77** (2.71)	-.21 (.73)	.21 (1.01)	.29 (1.28)	-.02 (.07)	-.21 (.88)	.85** (2.87)	.04 (.17)
Married	.14 (.48)	-.23 (.66)	-.23 (1.06)	-.27 (1.20)	.29 (.97)	-.66** (2.68)	.26 (.88)	.06 (.29)
College Education	.48 (1.30)	-.35 (.83)	-.46 (1.15)	-.54 (1.06)	.50 (1.60)	-.18 (.47)	.49 (1.32)	.70* (2.54)
In Labor Force	.09 (.30)	.35 (1.02)	.09 (.39)	-.13 (.52)	-.26 (.89)	-.18 (.71)	-.19 (.53)	-.28 (1.12)
Mental Health Contact	.07 (.35)	.25 (.74)	.24 (1.90)	.07 (.50)	.27 (1.75)	-.04 (.24)	.43** (2.74)	.27* (2.05)
<i>Attributions</i>								
Seriousness	.42* (2.43)	1.04** (3.01)	.63** (3.47)	.54** (3.35)	.30 (1.02)	.94** (5.46)	.67** (2.80)	.80** (3.17)
Brain Disease	.91** (5.83)	-.14 (.75)	.56** (4.72)	.57** (4.46)	1.03** (6.00)	.53** (4.10)	.81** (4.74)	1.19** (6.89)
Genetics	.28 (1.73)	.31 (1.53)	.25* (1.97)	.31* (2.28)	.68** (3.83)	.51** (3.81)	.01 (.08)	.77** (4.79)
Way Raised	-.16 (1.04)	.28 (1.75)	-.35** (2.86)	-.40** (3.06)	-.42** (2.60)	-.11 (.81)	-.27 (1.72)	-.38** (2.99)
Stress	.06 (.27)	-.42* (2.42)	-.08 (.65)	.65** (3.78)	-.10 (.53)	.31* (2.14)	-.18 (.88)	-.11 (.69)
Cut 1	1.85	.47	-.43	1.65	-.144	2.97	-.135	3.16
Cut 2	3.03	3.58	.97	3.11	.70	5.07	1.05	4.54
Cut 3	4.99	--	3.27	5.92	3.94	7.46	3.64	7.75
Pseudo-R ²	.32	.17	.24	.27	.37	.34	.28	.40
LR- ² (13)	81.96	37.65	91.29	93.11	110.67	117.87	72.86	178.23
Observations	p .01 (251)	p .01 (253)	p .01 (381)	p .01 (343)	p .01 (290)	p .01 (324)	p .01 (288)	p .01 (448)

Notes: Numbers represents coefficients, numbers in parenthesis are z-values;

* Significant at the .05-level,

*** Significant at the .01-level; Pseudo- R^2 is Cragg-Uhler R^2

Table 3

Binary Logit Regression of Lay Diagnosis of Vignette Case as “Schizophrenia” on Selected Independent Variables: Stigma in Global Context – Mental Health Study (SGC-MHS).

	Bulgaria	Cyprus	Germany	Hungary	Iceland	Spain	G. B.	U.S.
<i>Vignette Characteristics</i>								
Female	.40 (1.12)	.16 (.51)	.20 (.66)	-.10 (.32)	-.32 (1.14)	.02 (.09)	-.40 (1.37)	.16 (.73)
Outgroup	-.45 (1.26)	-.58 (1.81)	.08 (.28)	.35 (1.06)	.06 (.21)	.44 (1.66)	.17 (.58)	.41 (1.85)
<i>Respondent Characteristics</i>								
Age	-.01 (.77)	.01 (.92)	-.02 (1.65)	-.01 (.99)	-.02 (1.95)	.01 (1.03)	-.02 (1.75)	-.01 (1.59)
Female	-.07 (.18)	-.11 (.33)	.20 (.67)	-.70* (2.01)	.26 (.94)	-.03 (.11)	.29 (.95)	-.31 (1.38)
Married	-.60 (1.59)	.34 (.85)	.34 (1.10)	-.63 (1.88)	-.21 (.65)	-.34 (1.21)	.51 (1.67)	.02 (.07)
College Education	.74 (1.70)	-.07 (.14)	.50 (.89)	.30 (.43)	.36 (1.10)	.11 (.24)	-.04 (.11)	-.20 (.75)
In Labor Force	.13 (.32)	.30 (.75)	-.07 (.21)	.24 (.66)	-.34 (1.08)	.62* (2.09)	-.12 (.33)	.12 (.48)
Mental Health Contact	-.41 (1.51)	-.32 (.90)	.02 (.09)	.28 (1.46)	.14 (.81)	.12 (.65)	.22 (1.34)	.29* (2.23)
<i>Attributions</i>								
Seriousness	.88** (2.60)	.99* (2.19)	.20 (.66)	.43 (1.59)	-.06 (.18)	.70** (3.29)	1.00** (2.68)	.83* (2.41)
Brain Disease	.50* (2.35)	-.01 (.05)	.75** (4.33)	.48** (2.63)	.75** (3.71)	.60** (3.91)	.93** (4.46)	.66** (3.80)
Genetics	1.20** (4.92)	.57* (2.43)	.41* (2.46)	.44* (2.22)	.44* (2.20)	.53** (3.49)	.61** (2.95)	.29 (1.73)
Way Raised	-.41* (2.10)	.41* (2.21)	-.63** (3.23)	-.29 (1.47)	-.39* (2.20)	-.09 (.59)	-.49** (2.81)	-.40** (3.13)
Stressful Circumstances	-.39 (1.40)	-.91** (4.13)	-.43* (2.57)	-.32 (1.33)	-.17 (.87)	.05 (.28)	-.58* (2.44)	-.73** (4.38)
Constant	-5.93	-3.41	-2.54	-3.17	-1.75	-6.52	-5.39	-3.10
Pseudo-R ²	.41	.27	.31	.17	.23	.29	.36	.26
LR- ² (13)	77.09	52.18	79.23	35.37	50.87	74.08	87.47	93.15
Observations	p .01 (226)	p .01 (246)	p .01 (349)	p .01 (335)	p .01 (284)	p .01 (309)	p .01 (279)	p .01 (426)

Notes: Numbers represents coefficients, numbers in parenthesis are z-values;

* Significant at the .05-level,

** Significant at the .01-level; Pseudo-R² is Cragg-Uhler R²

Table 4

Ordered Logit Regression of Improvement with Treatment and OLS Regressions of the Perceived Importance of Various Sources of Formal and Informal Help on the Lay Diagnoses of "Mental Illness" and Schizophrenia: Stigma in Global Context – Mental Health Study (SGC-MHS).

	Bulgaria	Cyprus	Germany	Hungary	Iceland	Spain	G.B.	U.S.
<i>Mental Illness</i>								
Improve with treatment	.14	-.07	.02	.40*	.55*	.12	.48*	.37*
Doctor Important	.15	-.64*	.38**	.37*	.36	.09	.04	.27
Psychiatrist Important	.50**	.36	.62**	.31*	.42**	.79**	.51**	.59**
Counselor Important	.64**	.11	.44**	.10	.38**	.65**	.81**	.51**
Family Important	.11	-.52*	.10	-.02	.13	.10	-.22	-.14
Friends Important	.19	.20	.23	-.19	-.13	-.09	-.01	-.26
Religion Important	-.27	.04	.37	.54*	-.30	-.71**	-.47	-.28
<i>Schizophrenia</i>								
Improve with treatment	-.34	-.71*	-.72*	-.79*	-.02	-.74**	.02	-.08
Doctor Important	-.62	-.68	-.35	-.31	.02	-.17	-.04	.10
Psychiatrist Important	.48	.84**	.21	-.03	.29	.54*	.18	.18
Counselor Important	.57	.40*	.19	.52	.24	.24	.23	.52*
Family Important	.15	-.29	-.24	-.60*	.13	-.31	-.48*	-.13
Friends Important	.19	.09	-.61*	-.64	-.10	-.08	-.61*	-.28
Religious Leader Important	.65	-.11	-.48	-.95*	-.29	.16	-.82*	-.19

Notes:

* Significant at the .05-level,

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Significant at the .01-level; All models control for the gender and minority status of the vignette character, the age, gender, marital status, education, employment status and mental health contact of the respondent, the perceived seriousness of the condition, and whether the respondent believes it to be caused by brain disease, genetics, the way the individual was raised, and/or stress.