

Measurement of Attitudes, Beliefs and Behaviors of Mental Health and Mental Illness

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1

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Overview:

Accurate measurement of mental illness stigma will rest on our ability to conceptualize stigma processes, the factors that produce and sustain such processes, and the mechanisms that lead to stigma outcomes. To better observe and measure the essential components of stigma, this paper is designed to assist researchers in selecting or creating measures that can address critical research questions regarding stigma. Our conceptualization of stigma processes leads us to consider components of labeling, stereotyping, setting apart, emotional responses, status loss and discrimination. We provide a narrative review of measures of mental illness stigma and profile the status of current stigma measurement. We identify commonly used measures so that readers can make decisions as to whether the described measure might be appropriate for their study. We end by identifying promising measurement strategies that advance important areas in stigma measurement.

Introduction

If we are to systematically reduce stigma and improve mental health and mental health care, we must have the capacity to observe and measure stigma. The central purpose of this paper is to assist researchers interested in the stigma of mental illness to accurately select and create empirically-based measures of stigma. We also identify new advances in stigma measurement that address gaps that need further attention. We examine the measures identified by recent systematic reviews of the stigma measurement literature (Livingston & Boyd, 2010; Brohan, Slade, Clement, & Thornicroft, 2010; Stevelink, Wu, Voorend, Brakel, 2012), which in total reviewed 217 articles focused on the stigma of mental illness that were published between 1900 and 2011. Also we utilized focal measures assessing attitudes of healthcare providers, which comprise the Attitude to Mental Illness Questionnaire (AMIQ) and The Psychiatric Disability Attribution Questionnaire (PDAQ) (Van Boekel, Brouwers, Weeghel, & Garretsen, 2013).

We review the breadth of measurement approaches used in studying stigma, the study populations that these measures have been used with, and the range of stigma concepts covered. We also present brief summaries of commonly used stigma measures via detailed tables. In the Tables we describe the stigma domains measured, provide sample items, review reliability and validity, indicate whether the measure has been utilized with a commonly used vignette design, identify strengths and weaknesses, and provide citations. Following these tables we address four advances in the measurement of stigma that simultaneously indicate a need for further development: 1) distinguishing stigma of the “label” vs. stigma of the mental illness “symptom and experience”; 2) implicit attitudes of stigma, 3) assessment of structural discrimination related to mental illness and 4) assessment of culture-specific aspects of stigma.

Conceptualization of Stigma

Dating from Goffman (1963) and before (Schwartz et al. and Cumming and Cumming),

multiple conceptualizations of stigma have been put forward. While differences exist, a common core can be identified. One way to think about how they differ but still fill out the stigma concept is to identify whether they seek to describe what stigma is (Goffman 1963; Link and Phelan 2001), how stigmatizing circumstances differ one from the other (Goffman 1963, Jones et al 1984), where stigma comes from (Phelan et al. 2008) or how does stigma vary across cultures (Yang et al. 2007). For reviews of stigma conceptualizations see (Link et al. 2004; Pescosolido 2015).

Stigma Measurement Approaches

We base our review on systematic literature searches of terms synonymous with “stigma” and “mental disorders” (Livingston & Boyd, 2010; Brohan, Slade, Clement, & Thornicroft, 2010; Stevelink, Wu, Voorend, Brakel, 2012). While this review is not exhaustive; it represents a broad assessment of current stigma measures in use.

General Community Attitude Measures

Social Distance

One of the most commonly used approaches, social distance, assesses a respondent’s willingness to interact with a target person in different types of relationships. Scale items differ in the closeness of the association a respondent is asked to endorse or decline. This concept has the longest tradition, stemming from the first social distance scale (Bogardus 1925) which was used to describe social distance by race/ethnicity, followed by the assessment of mental illnesses in Cumming and Cumming’s (1957) study. Vignettes have been frequently used in tandem with social distance scales, starting since Phillips (1963) and continuing to modern-day nationally-representative attitude surveys (Pescosolido et al, 2013). Another example is the RIBS (“Reported and Intended Behavior Scale”) which has been used in the national UK “Time to Change” anti-stigma campaign that evaluates intended behavior towards living with, working with, working nearby, and continuing a relationship with someone with a mental illness (Evans-Lacko, ... & Thornicroft, 2011). Good to excellent internal-consistency reliability and construct validity have been reported for these scales. However, limitations include 1) social-desirability bias motivated by a desire not to want to appear heartless or ignorant and 2) the fact that the items assess behavioral intentions rather than behaviors.

Semantic Differential and Related Measures

Developed by Charles E. Osgood and colleagues (1957), the Semantic Differential is a measurement technique that provides a direct assessment of stereotyping, or the tendency to link a label like “person with mental illness” with negative attributes. The Semantic Differential presents respondents with labels, or concepts, such as “person with mental illness” and asks them to evaluate the extent to which those labels are associated with various characteristics,

each bounded by a pair of polar adjectives (e.g., “dangerous”—“safe”). In addition to the concepts of interest (e.g., “person with mental illness”), respondents rate one or more additional concepts (e.g., “average person” or “me”) using the identical response scales to provide a point of comparison for evaluations of the target concepts (Nunnally (1961), Olmsted and Durham (1976), and Crisp et al. (2000)). Advantages of this perspective are that it provides a direct measure of stereotyping, evidences good reliability and validity, and allows flexibility to modify the concepts and evaluative dimensions. To maintain comparability to other studies, however, researchers should replicate at least some of the previously used adjective pairs. Limitations include vulnerability to social-desirability bias.

Opinions About Mental Illness (OMI) and the Community Attitudes towards the Mentally Ill (CAMI)

Developed in the early 1960's by Cohen and Struening (1962) and Struening and Cohen (1963), the OMI sought the “adequate conception and objective measurement of attitudes towards mental illness (p. 349)” through a multidimensional scale. The Opinions about Mental Illness is a 51-item instrument covering 5 dimensions: A) authoritarianism B) benevolence; C) mental hygiene ideology D) social restrictiveness; E) interpersonal etiology. Advantages of this scale include its breadth of coverage of salient domains of stigma (e.g., from Link and Phelan’s (2001) and Jones et al’s (1984) frameworks), as well as the possibility of assessing changes in attitudes over time due to its long history of use. A disadvantage of the OMI is that new issues, such as deinstitutionalization and the increased salience of genetic factors in the etiology of mental illnesses, have arisen since it was developed. To address the issue of deinstitutionalization and community-centered treatment, Taylor, Dear and Hall (1979) and Taylor and Dear (1981) created the Community Attitudes Toward Mental Illness (CAMI), using the OMI as a conceptual basis, with a new community mental health ideology dimension. Reliability and construct validity of the subscales is reported as good. The major strength of the CAMI is its development of attitudes towards community mental health treatment facilities, which represents a new development in the care of people with mental illnesses.

Attributional Measures

Measurement focusing on a subject's emotional reactions (e.g., pity, anger), behavioral intentions, and perceived controllability of a stigmatizing condition stems from attribution theory (Weiner, 1988). According to attribution theory, the target's perceived responsibility for the stigmatizing circumstance predicts either anger and punishing actions (if believed to be controllable), or pity and helping behaviors towards the target (if believed to be uncontrollable). Causes that are seen as changeable over time generate conceptions that recovery from the condition is possible, whereas causes that are seen as unchanging elicit beliefs that the condition is immutable. Attribution measures include assessments of responsibility and the emotional reactions that variation in responsibility might induce such as *pity, anger, fear, helping/ avoidant behavior, and coercion-segregation* (see Corrigan et al, 2003; also see

Reisenzein 1986 and Weiner et al, 1988). Internal consistency and construct validity (Corrigan et al, 2003; Corrigan et al, 1999) has been reported as good.

Emotional Reaction to Mental Illness Scale

Angermeyer and Matschinger (1996) developed a scale to measure emotional reactions toward persons with mental illnesses. The final measure consisted of 12 five-point Likert-scale items, with each item assessing a single emotional response. Factor analysis yielded three dimensions: 1) aggressive emotions (e.g., anger, irritation); 2) prosocial reactions (desire to help, sympathy); and 3) feelings of anxiety (uneasiness, fear). This instrument's key strengths are its assessment of affective experiences of the stigmatizer which have previously been under-assessed and its demonstrated reliability and validity.

Perceived Devaluation-Discrimination – General Public.

Link (1987) constructed a perceived devaluation-discrimination measure to test hypotheses associated with the “modified labeling theory.” The measure assesses a respondent’s perception of what *most other people* believe. Link (1987; Link et al. 1989; 1991;1997;2001) developed a 12-item perceived devaluation-discrimination measure which asks respondents the extent to which they agree or disagree with statements indicating that most people devalue individuals who have used psychiatric treatment. While used mainly among people with mental illnesses to capture an anticipation of rejection, it can be administered to members of the general public to gauge the extent to which people believe people with mental illnesses are devalued and discriminated against are endorsed in the community. The scale has reliability of approximately .8 and is valuable because it can be administered to consumers and the general public, thereby allowing tests of the modified labeling theory prediction that the scale has self-salience for consumers but not for people who have never been labeled. A limitation is some vagueness about who the respondent is thinking of when asked about “most people.”

Mental Health Consumer and Family Stigma Measures

Mental Health Consumers’ Experience of Stigma and Discrimination

While earlier measures of stigma experiences exist (CESQ-- Wahl, 1999) and with specific use for dually-diagnosed persons with mental illness and substance abuse (Link et. al, 1997), the most comprehensive measure of discrimination and stigma faced by people with mental illness is the “Discrimination and Stigma Scale (DISC)”. The DISC is a 36-item scale that was developed and cross-culturally adapted by Thornicroft et al (2009) in 27 (primarily European) countries. The first 32 items assess whether consumers have experienced discrimination because of their mental illness; the valence (positive or negative; 7- point scale) of such discrimination; and its severity. The domains address key areas of everyday life and

social participation (e.g., work, marriage, housing, and leisure activities). The items also assess quantitative and qualitative appraisal of responses by inquiring in the cases when respondents report discrimination to provide a detailed verbatim example. The final four items assess to what extent participants limit their own involvement in key aspects of everyday life, including work and intimate relationships. Good reliability and validity have been reported among a multinational sample among people with schizophrenia (Thornicroft, 2009 et al.) and depression (Lasalvia, 2013 et al)

Modified Labeling Theory—Perceived Devaluation-Discrimination and Other Processes

Previously we described Link's (1987) perceived devaluation-discrimination scale for use with the general public. An additional set of measures have been developed to assess stigma experienced by consumers according to modified labeling theory. According to this theory, one's perception of how most people treat a person who is officially labeled as having a mental illness becomes personally relevant when a person develops a mental illness and is officially labeled ("Perceived Devaluation-Discrimination" measure described below). When anticipating status loss and discrimination, a person may seek to avoid such negative outcomes by adopting coping orientations including secrecy and withdrawal ("Coping Orientations") and experience "Stigma Related Feelings" (measures described below). More recently Link et al. (2015) expanded modified labeling theory based on the idea that a strong labeling experience can induce what they call "symbolic interaction stigma" in which people contemplate the reactions of others, monitor situations for potential signs of bias and strategically seek to minimize the possibility that rejection might occur. This conceptualization led to the development of measures of "stigma consciousness" (whether the person believes other people are treating them in relation to their history of mental illness), "anticipation of rejection" (whether a person expects rejection) and "concern with stay in" (whether a person self-monitors behaviors that others might view as evidence of incipient mental illness). These forms of symbolic interaction were significantly associated with lowered self-esteem and social exclusion. Stigma-consciousness is a 5 item scale based on Pinel's (1999) work regarding gender and race but adapted for mental illness (alpha .64), Anticipation of reject is a 7 item scale extending modified labeling theory by taking the "do most people reject, look down etc." to ask the labeled individual whether he/she expects rejection (alpha = .85). Finally the "concern with staying in" scale includes 6 items asking the labeled individual whether he/she would be concerned that others would think his/her mental illness was "coming back" or was otherwise manifest in behaviors like "getting a little angry" or "talking loudly" (alpha = .76).

Perceived Devaluation-Discrimination is the 12-item measure whose content and scoring was described previously in "measures for the general public". In its use among consumers of mental health services, reliability and validity is good (Link et al. 1991; 2001). One meta-analytic review (Livingston and Boyd, 2010) indicated that the Perceived Devaluation Discrimination scale is the most widely-used assessment of internalized stigma, and that this

measure is associated with negative outcomes such as harmful psychological consequences and reduced social networks.

Measures of *Coping Orientations* include: 1) *Secrecy* or endorsement of concealment to avoid rejection; 2) *Withdrawal* or endorsement of avoidance to protect oneself from potential rejection; and 3) *Educating* or educating others to reduce the possibility of rejection (#1 through #3 are found in Link et al. 1989; revised in Link et al., 2002); 4) *Challenging* or confronting prejudice and discrimination; and; 5) *Distancing* or cognitively distancing oneself from the stigmatized group (#3 and #4 found in Link et al. 2002). Reliability and validity varies by scale, but is generally acceptable.

Measures of *Stigma-related Feelings* include: 1) *Feeling Misunderstood* or the extent to which people feel that their experience of mental illness has been misunderstood by others; 2) *Feeling Different and Ashamed* or the extent to which peoples' experiences of mental illness make them feel set apart, different from other people, and ashamed (Link et al. 2002; see below under "New Approaches" for a version of this scale that assesses shame-based emotions from "Labeling" vs "Symptom and Experiences" perspectives). Reliability and validity for these measures are good (Link et al., 2002).

Self-Stigma

As a set of separate processes from Devaluation-Discrimination of Consumers (which is termed "Stereotype Awareness by Corrigan et al, 2006), measures of "self-stigma" include: 1) "Stereotype Agreement" or when consumers agree with the same stereotypes of mental illness as held by the public, which may lead to; 2) "Self-concurrence" when consumers believe that culturally- determined beliefs of mental illness apply to them, which then may result in; 3) "Self-Esteem Decrement" or when the consumer's self-esteem is diminished due to concurrence with the negative belief. These three new scales (including a new scale for "Stereotype Awareness" based on Link's Devaluation- Discrimination Measure; 10 items each) are assessed in the Self-Stigma in Mental Illness Scale (SSMIS). Items assess the same 10 stereotypes across domains but have different introductory clauses to assess each concept (e.g., this clause for "Stereotype Agreement" reads: "'I think most persons with mental illness are..."). Reliability and validity for the SSMIS are good (Corrigan et al, 2006).

Considerations to Selecting Measures

The following questions might be considered in selecting appropriate stigma measures:

- 1) What is the research question regarding stigma, and what are the central stigma domains most relevant to the question?
- 2) Is an appropriate measure currently available? Alternatively, can an existing measure be modified?
- 3) Is the measure appropriate for the population of interest and to their particular social conditions? Are the terms used to refer to people with mental illnesses respectful? If

- not, can the measure be modified to make it appropriate?
- 4) Is the measure suitable to the proposed methods? Can it be administered by phone, paper and pencil, within the context of a vignette, in an experimental context, etc.? How feasible is the measurement task?
 - 5) What is the evidence regarding the measure's reliability and validity, particularly for its intended use?

Populations Studied

We now briefly review stigma measures by type of research participant. We organize these by broad classes referring to measures assessing the “General Population” and those for “Mental Health Consumers”. Measures were deemed *general population* studies if they surveyed the general population. Measures for *Mental Health Consumers* assessed individuals diagnosed with mental illness or who exhibited psychiatric symptoms. For each of these broad classes, measures were further subdivided into scales for “Adults” (individuals 18 years or older or college student groups); “Adolescents” (individuals 13-17 years old); and “Children” (12 years of age and under). We also included specialty groups of “Healthcare Professionals” (e.g., mental health professionals, general practitioners, medical students) and “Police” in General Population measures, and Caregivers of people with mental illness as individuals related by blood or marriage to people with psychiatric illnesses.

General Population-Adults

Prominent stigma measures used for adult general community members are listed in [Table 1](#). General population scales for adults cover most of the stigma domains described earlier; i.e., social distance, OMI/ CAMI, Semantic Differential, Attribution Measures, Emotional Responses, and Perceived Devaluation- Discrimination. Since stigma measures for adult community members were developed first, these measures tend to be more established in their use and evidence good reliability and construct validity. In particular, the social distance, semantic differential, and OMI scales have a long history of use, and social distance and semantic differential scales have been utilized as the primary outcome in nationally-representative surveys of attitudes towards people with mental illness in Australia (Reavley & Jorm, 2011) and the U.S. (Pescosolido et al., 2010). Measures for adults also have been adapted for stigma assessment among adolescents and children (see below). One weakness shared by this class of measures, as with all self-report measures, is that they do not account for social desirability bias (discussed under “Implicit Attitude Tests” below).

General Population- Adolescents

We identified two measures that were used to assess public stigma among adolescents ([Table 2](#)). The first, the Peer Mental Health Stigmatization Scale, is novel in that it assesses older children and adolescent's attitudes towards *adolescent peers* with mental illness. This

newly-developed scale has shown good initial reliability and can be used by children as young as 9 years old. The second scale, the Stigma Scale for Receiving Psychological Help, is novel in assessing the anticipated stigma that a peer with mental illness who received psychological help would experience by others (rather than how much stigma a respondent him or herself would endorse towards such a peer). This measure is thus best characterized as a measure of anticipated community stigma towards adolescents.

General Population-Children

Key stigma measures to assess public stigma among children are listed in [Table 3](#). Three of these measures (Horace Mann-Lincoln Institute of School Experimentation, 1957; Weiss, 1986; Morgan et al., 1996) assess social distance by gauging the type of relationship (Horace Mann-Lincoln Institute of School Experimentation, 1957), preferred physical distance (Weiss, 1986), or willingness to engage in different activities (Morgan et al., 1996) with a child with mental illness. The SAQ is particularly innovative in that it uses a videotape stimulus of children with and without a mental illness as stimuli for the participant to respond to, and has shown the strongest initial reliability among these measures. Another measure with relatively good reliability and construct validity is a 32-item semantic differential (Siperstein, 1980) to assess children's attitudes towards peers with disabilities, including peers with mental illness as well as other conditions such as intellectual ability, autism, obesity and cancer. Two final measures with relatively less psychometric validation assess public attitudes towards children via adaptation of attributional measures (Watson et al, 2004) and a mixed measure assessing both perceived devaluation-discrimination and opinions about mental illness (Heflinger, 2014). Overall, measures that assess stigma among children and adolescents constitute a welcome advance in stigma measurement, but remain in need of further use and validation.

General Population-Healthcare Professionals

We identified four measures used to assess public stigma among healthcare professionals specifically ([Table 4](#)). One measure (Strauser, Ciftci, & O'Sullivan, 2009) was utilized to assess healthcare providers' attributions (i.e., perceptions of controllability and stability of the condition) towards six categories of illness. Of these categories, two included mental illness conditions (psychosis and depression) and the rest consisted of AIDS, cocaine addiction, mental retardation, and cancer. This 36-item instrument shows moderate internal consistency for 5 of the conditions, except for depression which showed inadequate reliability. The second measure (Luty, Fekadu, Umoh, & Gallagher, 2006; Rao, Pillay, Abraham, & Luty, 2009) takes the innovative perspective of assessing health care professionals' attitudes towards a hypothetical colleague (described in a vignette) who was identified as having forensic issues, or diagnosed with schizophrenia or substance use disorder. Respondents are asked whether having such a colleague with this status would damage his or her career and if the respondent would be comfortable with the colleague at work. This measure has demonstrated initial reliability and validity, and suggests the new stigma domain of "professional competency and

acceptance at a healthcare setting” of a person with mental illness. The third measure (Kassam et al, 2010) was formulated to address the need for a measure of stigma appropriate for use with medical students. It aims to assess attitudes towards people with mental illness and includes questions such “Psychiatrists know more about the lives of people treated for a mental illness than do family members or friends This 16-item scale was then modified to create a version (Gabbidon et al, 2013) for students and staff in any health discipline, it contains questions such as “Working in the mental health field is just as respectable as other fields of health and social care”. A final measure, the MICA, has been developed by Graham Thornicroft’s group in the UK and has two versions assessing stigma among healthcare professionals and a second version for use among medical students.

General Population-Police

We identified four measures developed to assess public stigma among another key stakeholder group, that of police officers ([Table 5](#)). Two measures that show initial reliability use classic stigma perspectives—social distance (Broussard, 2014) and semantic differential (Broussard, 2014) via 5 dimensions of understandability, complexity, potency, activity, and evaluation. These two measures assess a new stigma domain that police officers might uniquely face; i.e., the role that police play in the management of people with mental illness within the community. One of these measures was a brief 6-item scale that was used in an exploratory study (Cotton, 2004); the second measure (Mental Health Attitude Survey for Police; Clayfield et al, 2011) is a vignette in which participants respond to a case about a person with schizophrenia (Martin et al. 2000) and has shown good initial reliability and validity. This 33-item measure assesses social restrictiveness, community mental health ideology and reflects attitudes of how police should manage people with mental illness via the lens of law enforcement.

Mental Health Consumers—Adults

Shifting now to measures that assess the experience of stigma from the perspectives of *mental health consumers* (i.e., individuals diagnosed with mental illness), there has been a remarkable proliferation of measures assessing the internalization of stigma ($n=7$) and experienced discrimination ($n=7$) of adult consumers specifically ([Table 6](#); note that these measures are classified as “primarily” one type, and as noted, there are “additional items” that may gauge other stigma domains). The effects of internalized stigma also have been the subject of meta-analytic review (Livingston and Boyd, 2010). The increased emphasis on internalized stigma measures reflects at least in part the recent shift towards the “psychologization” of internalized stigma (i.e., that stigma via exposure to negative societal stereotypes becomes introjected into the consumer’s sense of self) that might then be targeted by anti-stigma interventions. But if one examines the kinds of scenarios that Link et al. (2015) raise in their paper on symbolic interaction stigma one realizes that it is not necessary to internalize stereotypes (believe they are true about oneself – i.e., I am dangerous or incompetent) to

anticipate rejection, worry that others might read one's behavior as a sign of mental illness or treat one as a person with mental illness to the exclusion of other aspects of the self (friend, co-worker, son/daughter). These are things that other people sometimes do and engaging in symbolic interaction about them is reality based. With this in mind one argument is that what is needed is less the countering of inappropriate cognitions and more ways of dealing with possibilities that may occur in interactions with others.

Internalized Stigma. There are 7 measures that are primarily classified as Internalized Stigma measures. Two of the most prominently used represent the "Perceived Devaluation-Discrimination" (Link et al., 1989) and the "Self-stigma" measures (Corrigan 2006; including a brief version, Corrigan 2012) which have been described above. One additional measure (Link et al., 2014) utilizes the "Perceived Devaluation-Discrimination" perspective as its main perspective, and adds a "stigma impact on self-esteem and confidence in ability to complete tasks" subscale that shows adequate reliability. Another prominently utilized Internalized Stigma Scale (Ritsher, Otilingam & Grajales, 2003), while primarily classified as measuring Internalized Stigma, is comprised of five domains: 1) alienation; 2) stereotype endorsement; 3) discrimination experiences; 4) social withdrawal, and 5) stigma resistance. In addition to incorporating the perspectives of Experienced Discrimination ("discrimination experiences") and Coping Strategies ("social withdrawal"), this scale contributes a new stigma scale that measures positive aspects, that of "stigma resistance". While the "stigma resistance" subscale shows poor reliability, the ISMI has been widely used and the other subscales evidence good reliability and validity (and have been adapted cross-culturally). While another 10-item measure primarily assesses internalized stigma (Stuart, Milev & Koller, 2005) and encompasses several related subdomains (experienced stigma, social withdrawal, and impact of stigma), this measure has not been extensively tested and we thus recommend the ISMI instead. Finally, two measures that we have classified as primarily assessing Internalized Stigma have been adapted specifically for consumers with depression. The SSDS (Barney et al., 2010) assesses subdomains of what we would consider to be Internalized Stigma, including subscales of shame, self-blame, help-seeking inhibition, and social inadequacy. The SSDS shows adequate internal consistency and test-retest reliability, as well as construct validity. The second depression-specific scale (Kanter, Rusch & Brondino, 2008) assesses a domain of general self-stigma, but also includes subscales encompassing other stigma domains of secrecy, public stigma, treatment stigma, and experienced discrimination. While the "treatment stigma" subscale is a new contribution, this subscale is limited by it being assessed by a single item.

Methodological advantages and disadvantages of utilizing Internalized Stigma measures that assess distinct domains (e.g., "Perceived Devaluation-Discrimination") and theoretically-related Internalized stigma domains (e.g., the "Self-Stigma" scales) vs. those that assess multiple domains (e.g., the ISMI) where Internalized Stigma is one of several stigma domains are important to consider. The principle advantage of the first class of measures is that they offer distinct theoretical mechanisms by which stigma works to produce negative effects upon labeled individuals, which may then facilitate intervention. The primary disadvantage is that other stigma domains of interest (e.g., Experienced Discrimination) are not covered, which

would necessitate another scale having to be administered to ensure coverage of a range of stigma concepts. For the second class of measures, the principle advantages and disadvantages are the converse (i.e., that multiple stigma domains are examined in a more efficient manner, but that these multiple stigma domains may not have clearly-defined conceptual relationships to one another). Since both classes of measures have demonstrated strong reliability and validity in their use, ultimately investigators should select their measures based explicitly on their study purpose (i.e., to examine mechanisms of stigma or to describe multiple facets of it).

Experienced Discrimination. There are 7 measures that are primarily classified as Experienced Discrimination measures. Two of the most prominently used (Brohan et al., 2010; and the Wahl, 1999) have been described above. One other Experienced Discrimination scale (Björkman, Svensson & Lundberg 2007) adds 6 self-reported rejection experiences to 5 items from the CES-Q. However, we recommend the use of the DISC if the investigator's purpose is to examine discrimination across representative life domains due to the DISC's extensive cross-national validation as per above. The remaining 4 Experienced Discrimination measures offer distinct features that might of particular interest to investigators so we mention them briefly here. The EDS (Krieger et al., 2005) is a 17-item scale that assesses discrimination faced and stress levels experienced within different particular settings for the respondent, which offers advantages for investigators who wish to capture mental illness discrimination and stress that is context-distinct. Similarly, the MIDUS (Kessler, Mickelson & Williams, 1999) is a 22-item measure with good reliability that assesses major discrimination and day to day discrimination by different statuses (e.g., race, gender, sexual orientation, etc.), with mental illness being assessed by a question asking about discrimination due to "other characteristics". The SRER (Stuart, Koller & Milev, 2008) is a 12-item measure that adds assessment of rejection due to drug use as well as general mental illness experiences. Finally the SS (King et al., 2007) is a 28-item measure with good reliability that was developed based on qualitative research from patients' experiences of mental illness and assesses experience of discrimination, disclosure, and positive aspects (e.g., "Having had mental health problems has made me a more understanding person"). In addition to the ISMI, the SS identifies a new stigma domain by considering the potentially growth-promoting experiences that having mental illness challenges may have upon consumers.

Mental Health Consumers—Adolescents

Moses (2009) has developed two measures to assess stigma among adolescent consumers that have shown good initial internal consistency and construct validity ([Table 7](#)). The first assesses Internalized/Stigma-Related feelings via a 5-item measure that assesses adolescents' sense of shame, embarrassment, and worry about others' responses to their mental health condition. The second assesses the Coping Strategy of Secrecy via a 7-item measure that assesses the extent to which the adolescent believes he or she needs to conceal the mental health condition or treatment.

Mental Health Consumers—Children

We identified two measures developed to assess self-stigma among children who are consumers ([Table 8](#)). These two measures, while both specifically assessing stigma of ADHD, were developed with different foci. The first, the ASQ (Kellison et al., 2010) is a 26-item adaptation of an HIV stigma scale that assesses domains of anticipated self-stigma, disclosure concerns, negative self-image, and concern with public attitudes. While reliability and construct validity for the ASQ is good, because it was based on an HIV stigma scale, stigma items specific to ADHD were not queried. Alternatively, the SAMBA (Harpur et al., 2008) is a 16-item measure that assesses Perceived Devaluation-Discrimination and Experienced Discrimination via domains of perceived costs of medication, perceived benefits of medication, child stigma (perceived stigma that others have towards a child with ADHD and towards a child taking ADHD medication), and resistance. This measure adds a valuable new domain to stigma assessment of perceived stigma associated with psychiatric medication.

Mental Health Consumers—Caregivers

We identified seven measures developed to assess different aspects of caregiver stigma ([Table 9](#)). First, caregivers can be aware of the societal stereotypes that consumers face. Two measures assess this dimension. Accordingly, measures such as the Devaluation of Consumers scale (Struening 2001) measured the caregivers' perception of what the general public perceives of consumers. This 8-item scale assesses three aspects of devaluation of consumers including status reduction, role restriction and friendship refusal, which have demonstrated three distinct subscales via factor analysis. Another measure, the SAMBA- parent version (Harpur et al., 2008), assesses public stigma associated with a child taking medication for ADHD. This 27-item measure assesses similar subscales to the SAMBA child version-- i.e., perceived costs of medication, perceived benefits of medication, child stigma (perceived stigma that others have towards a child with ADHD and towards a child taking ADHD medication), parent stigma (perceived stigma that others have towards the parent because the child is taking ADHD medication), child resistance, dosing flexibility, and parent medication related inconsistency—and shows correlations with the child version scores.

Second, caregivers can be recipients of stigma from others due to being closely-associated with the consumer. Four measures assess this dimension. The Devaluation of Consumers' Families Scale (Struening, 2001) measured the caregivers' perception of to what extent the general public devalues consumers' *family members*. This 7-item scale assesses three factors including community rejection, causal attributions, and uncaring parents, and also showed three distinct subscales via factor analysis. Second, the Stigma by Association Scale (Pryor et al., 2012), is a 28-item scale that assesses family members' cognitive, emotional, and behavioral reactions to being related to someone with a stigmatized condition (i.e., mental illness). Third, another 22-item measure (the Affiliate Stigma Scale; Mak and Cheung, 2008) assesses caregivers' stress, burden and positive perceptions in caring for the consumer. This

measure shows good internal consistency and has been used in caregivers of people with mental illness and intellectual disabilities. Fourth, the Experience of Caregiving Inventory (ECI; Sz mukler et al., 1996) is an 8-item measure that primarily assesses experienced discrimination and effects on family by caring for a person with mental illness. Evidence for this measure to date however has been limited to content validity.

Third, families might act as potential perpetrators of stigma. A single 9-item measure, the ASQR (Caqueo-Urizar et al, 2011), assesses attitudes of family members toward schizophrenia specifically, and includes cognitive, behavioral, and affective components. However, the reliability and validity for this scale is undermined by the small sample used in its pilot validation.

Advances in Stigma Measurement

Here we address four advances in the measurement of stigma that simultaneously indicate a need for further development.

Distinguishing stigma of the “label” vs. stigma of the mental illness “symptom and experience”

When assessing self-stigma of individuals with mental illness, most measures to date focus upon the general experience of mental illness. For example, an internalized stigma item from the “Alienation” subscale of the ISMI reads “I am embarrassed or ashamed that I have a mental illness.” While useful for capturing the generalized experience of having a mental illness, most measures do not distinguish between the stigma that arises from varying sources (labeling vs. symptoms), which may have differential effects upon people with mental illness. A recently-published study (Yang et al, 2015) introduced measures so that stigma from varying sources (labeling vs. symptoms) might be distinguished. On one hand, ‘labeling-related’ stigma arises in relation to being psychiatrically labeled (i.e., attending psychiatric services, or being told that one has a specific psychiatric diagnosis). On the other hand, ‘symptom-related’ stigma manifests specifically due to the odd symptoms or behaviors associated with a specific psychiatric syndrome (e.g., manifesting behaviors of lack of motivation and social withdrawal associated with depression). These forms of stigma are only modestly associated with one another ($r = .3$), suggesting that these are relatively distinct sources of stigma (Yang et al, 2015). Because stigma from these two sources might act differently, differentiating their effects upon an individual may facilitate intervention. For example, Yang et al’s (2015) study found among clinical high risk for psychosis youth, that shame due to ‘labeling’ was associated with increased anxiety, while shame due to ‘symptoms’ was associated with increased depression. To address anxiety associated with labeling-related shame, clinicians might address an individual’s sense of shame by helping to develop selective disclosure strategies regarding whom to tell about their attending a specialized psychiatric clinic and what to say. While this approach has been newly-developed for “clinical high risk for psychosis” youth specifically, it may yield important new findings for other mental illnesses as well that further elucidate mechanisms by which stigma works.

Implicit Attitudes of Stigma

The Implicit Association Test (IAT) is a commonly used behavioral method for assessing the strength of associations among concepts. This is achieved by having the respondent sort stimulus exemplars from four concepts using response options (e.g. 'in' or 'out'). The IAT is predicated on the assumption that this sorting task should be easier when the two concepts that share a response are strongly associated (e.g. "dangerous" and "schizophrenia") than when they are weakly associated (e.g. "safe" and "schizophrenia"). In a review of the IAT's psychometric properties, covering its use between 2000 to 2007 during which it was primarily used to measure racial biases, Nosek et al. (2007) reported that internal consistency ranged from .7-.9 with stable test-retest reliability (average $r = .56$). Average predictive validity ranged from $r = .25$ to $.27$ (Nosek et al. 2007, Greenwald et al 2009 in a review of 122 research reports) with associated outcomes. Specifically regarding mental illness stigma, the Brief Implicit Association Test--self-stigma (Denenny et al. 2014) found initial evidence for internal consistency, 30 minute test-retest reliability, and construct validity.

One major strength of the IAT is that it is intended to tap implicit cognition to reveal associations that respondents are unwilling or unable to report, thus making it less vulnerable to social desirability biases (Nosek et al, 2007). As mentioned earlier, one major disadvantage of self-report stigma measures is that they are influenced by social desirability biases. Incorporating use of the IAT into an assessment battery may help to address this bias. One disadvantage however is that the IAT can only be administered via computer, thus limiting its administration in some cases.

Assessment of structural discrimination related to mental illness

While structural discrimination is seen to play a powerful role in limiting life opportunities for people with mental illness (Corrigan et al, 2004), approaches to assess structural discrimination have only recently been developed for mental illness stigma. Rather than assessing stigma as a variable experienced from the individual perspective, stigma is operationalized via population-level variables that are then evaluated for their impact on individuals with mental disorders. In one seminal example, Evans-Lacko et al. (2012) operationalized country-level stigma variables via the Eurobarometer surveys, deriving data on help-seeking for mental health problems, attitudes towards mental illness, access to mental health-related information, use of antidepressants, and comfort when talking to someone with a mental health problem. Researchers found that in countries where the population expressed less stigma across these population-level variables, individuals with mental health problems in a sample of 1,835 consumers across 14 European countries reported lower rates of individual-level perceived discrimination and self-stigma. Further, mental health consumers living in countries with more population-level positive attitudes towards speaking to people with mental illness experienced less individual-level self-stigma and felt more empowered.

In a second important example of this approach, Evans-Lacko, Knapp, et al (2013) sought to assess whether the effect of the economic recession on employment of people with

mental health problems differed by mental illness stigma measured on the population-level. Responses were aggregated within each country to obtain a country-level measure of stigmatizing attitudes. They found that in times of economic hardship, individuals with mental health problems experienced a greater disparity in employment. Furthermore, in these economically difficult periods, men and those living in countries with greater population-level mental illness stigma had a greater risk of experiencing employment disparities. These important studies offer innovative strategies for assessing structural discrimination via population-level variables that may constrain recovery and life opportunities for people with mental illness.

Assessment of culture-specific aspects of stigma.

Stigma measurement in different cultural settings, including ethnic minority groups within the U.S., has assumed increasing importance. While it is understood that stigma varies across different cultural contexts, attempts to characterize stigma in culturally-diverse groups have not systematically attempted to assess culture-specific forms of stigma. A recent systematic literature review (Yang et al, 2014) assessing 196 empirical, cross-cultural studies of stigma examined to what extent stigma measures were culturally-derived or were adapted from Western measures. Only a small minority of studies (2.0%) featured quantitative stigma measures that were derived within a non-Western European cultural group (i.e., assessed culture-specific domains of stigma). The vast majority of studies (77%) instead used adaptations of existing Western-developed stigma measures with new cultural groups, with a sizeable proportion (16.8%) of studies utilizing generic qualitative methods.

To address the paucity of studies characterizing culture-specific forms of stigma, a recent formulation of culture—as the everyday interactions that ‘matter most’ to individuals within a cultural group—shows promise to identify culturally-specific stigma dynamics relevant to measurement. The ‘what matters most’ perspective enables identification of how stigma impairs an individual’s abilities to participate in of the everyday activities that comprise cultural ideals of ‘personhood’. The ‘what matters most’ perspective also offers a conceptual advantage over general qualitative approaches by providing a specific focus for qualitative inquiry. Within ethnic minority groups in the U.S., ‘what matters most’ includes examples of ‘preserving lineage’ among specific Asian groups, ‘fighting hard to overcome problems and taking advantage of immigration opportunities’ among specific Latino-American groups, and ‘establishing trust among religious institutions due to institutional discrimination’ among African-American groups. This perspective thus promises to aid identification of essential cultural interactions that shape culture-specific expressions of stigma.

Conclusion

As can be evidenced from this review, robust measurement has been developed to assess different forms of stigma that did not exist a relatively short time ago. A few trends can be identified from this review. First, expansion of public stigma measures to new groups (e.g.,

police officers, health care professionals, children and adolescents) are primarily based upon measurement perspectives developed and validated among adults. An example of this is the concept of “social distance”, which is easily transportable and applicable to other groups. Second, the domain of internalized stigma, or measure of self-stigma among individuals identified as having mental illness, has proliferated in particular. This focus has led to improved identification of stigma processes that might adversely impact the individual (e.g., Corrigan’s differentiation between levels of “stereotype awareness”, “stereotype agreement” and then “stereotype impacts on self-esteem”) that may then facilitate anti-stigma intervention efforts. Also, new and notable domains of internalized stigma have been identified, including stigma due to taking psychiatric medications, as well as “strengths-based” responses to stigma, such as the “stigma resistance” subscale of the ISMI. Developing measures of capacities to resist stigma is a particularly important direction that will hopefully spur further work in this novel area.

Finally, an important and cautionary note-- while measures of the different facets of stigma have proliferated, we suggest that measures should be explicitly linked to clear explanations or theory about why stigma might manifest in the way as it does. That is, as our capacity to capture different aspects of stigma greatly improves, it remains equally as important to articulate precisely how these constructs grasp *how the phenomenon of stigma occurs*. We therefore continue to advocate that measures should be chosen for their theoretical relevance. This approach will enable researchers to ultimately advance our understanding of how stigma exerts its negative effects upon individuals, and to devise interventions to reduce its harmful effects.

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Table 1. Adult Scales

Table 1. Adult Scales							
Name	Domain	Definition	Sample Item	Reliability & Validity	Vignettes	Pros	Cons
<u>Social Distance Scale (SDS)</u>	Social distance	The scale comprises seven items (e.g., "How would you feel about renting a room in your home to a person with severe mental illness?") that participants rate on a 0- to 3-point willingness scale (3 = definitely unwilling). The sum of ratings equals social distance, with higher scores representing greater desire to distance oneself from persons with mental illness	"How would you feel about renting a room in your home to a person with severe mental illness?" (Whatley 1959; Penn 1994)	<u>Validity</u> Cronbach's alpha = 0.75-0.86 <u>Reliability</u> Test-retest reliability = 0.84	Phillips 1963 – first to use social distance scale in vignette expt: showed that help source influences desire for social distance (rejection may be a consequence of seeking tx) Includes depression, schizophrenia (Penn 1994) Mostly measured through vignettes henceforth	<u>Pros</u> - good to excellent internal-consistency reliability (0.75-0.90+) - high construct validity	<u>Cons</u> - social desirability bias - self-report bias: reported intentions are not the same as actual behaviour
<u>Community Attitudes towards</u>	Social distance	40 item questionnaire that measures authoritarianism,	"As soon as a person shows signs of mental disturbance, he should be	<u>Validity</u> Alpha = 0.87	No examples	<u>Pros</u> - measures a range of elements in MI attitudes	<u>Cons</u> - components may require more factor analysis

Table 1. Adult Scales

<p><u>Mental Illness (CAMI) scale</u></p>		<p>benevolence, social restrictiveness, and community mental health ideology.</p> <p>Initially 4 components: (1) Authoritarianism (2) Benevolence (3) Social Restrictiveness (4) Community MH Ideology</p> <p>(Taylor & Dear, 1981)</p> <p>More recent factor analysis distills 3 components: (1) Fear & Exclusion (2) Social Control (3) Goodwill</p> <p>(Wolff 1996)</p>	<p>hospitalized.”</p> <p>(Wolff et al., 1996)</p>	<p><u>Reliability</u></p> <p>(1) Authoritarianism: 0.68</p> <p>(2) Benevolence: 0.76</p> <p>(3) Social Restrictiveness: 0.80</p> <p>(4) Community MH Ideology: 0.88</p> <p>(Taylor & Dear, 1981)</p>			
<p><u>Semantic Differential</u> (no specific name)</p>	<p>Semantic differential (adjective lists)</p>	<p>7-point scale, the extremes of which bear anchoring statements</p>	<p>“dangerous to others-not dangerous to others”</p> <p>“strong-weak”</p>	<p><u>Reliability</u></p> <p>r = 0.95 to 0.99 (high correlations among ratings of pairs)</p>	<p>No examples</p>	<p><u>Pros</u></p> <ul style="list-style-type: none"> - direct measure of stereotyping - high reliability, validity 	<p><u>Cons</u></p> <ul style="list-style-type: none"> - social desirability bias

Table 1. Adult Scales

			“valuable-worthless”	(Olmsted & Durham 1976)		- as a measurement approach (and not a measure), allows for flexibility	
<u>Opinions about MI (OMI) Scale</u>	Opinion about mental illness & Community attitudes about MI	51-item instrument comprising 5 dimensions: (1) authoritarianism; (2) benevolence; (3) mental hygiene ideology (4) social restrictiveness (5) interpersonal etiology	“Even though patients in mental hospitals behave in funny ways, it is wrong to laugh about them” (Struening & Cohen, 1963)	<u>Validity</u> Overall alpha not reported (1) authoritarianism: 0.77-0.80 (2) benevolence: 0.70-0.73 (3) mental hygiene ideology: 0.29-0.39 (4) social restrictiveness: 0.71-0.77 (5) interpersonal etiology: 0.65-0.66	No examples	<u>Pros</u> - poignant and complex stimuli that is nuanced - covers range of salient issues - long history may allow for longitudinal/cultural observations	<u>Cons</u> - new issues have arisen since development of this measure
<u>Attribution Questionnaire (AQ)</u>	Attribution measures	27 items using a 9-point response scale (1 = not at all, 9 = very much); measuring 6	“How dangerous would you feel Harry is?” *see Vignettes	<u>Validity</u> (1) personal responsibility: 0.70	Vignette of “Harry” - “Harry's mental illness was originally caused by a severe	<u>Pros</u> - measures how causal associations influence stigma - some construct validity	<u>Cons</u> - may possibly be subject to social desirability

Table 1. Adult Scales

		<p>constructs:</p> <p>(1) personal responsibility (3 items)</p> <p>(2) pity (3 items)</p> <p>(3) anger (3 items)</p> <p>(4) fear (4 items)</p> <p>(5) helping/avoidant behaviour (4 items)</p> <p>(6) coercion-segregation (4 items)</p>	<p>(Corrigan et al., 2003)</p>	<p>(2) pity: 0.74</p> <p>(3) anger: 0.89</p> <p>(4) fear: 0.96</p> <p>(5) helping/avoidant behaviour: 0.88</p> <p>(6) coercion-segregation: 0.89</p> <p>(Corrigan et al., 2003)</p> <p><u>Reliability</u> Test-retest reliability = 0.75-0.90</p>	<p>head injury suffered during a car accident when he was 22" (cause not under his control)</p> <p>- "Although he sometimes hears voices and becomes upset, Harry has never been violent; like most people with schizophrenia, Harry is no more dangerous than the average person"</p> <p>- Ps respond 9-point scale how much responsibility they attribute to Harry</p>		
<p><u>Affect Scale (AS)</u> – formerly <u>Affective Reaction Scale</u></p>	<p>Emotional reactions to MI</p>	<p>10 polarized adjective-pairs having emotional content, using a 7-point scale</p>	<p>"If you were to interact with Jim Johnson, indicate how you would feel:</p> <p>pessimistic-optimistic tranquil-anxious"</p>	<p><u>Validity</u> Alpha = 0.89</p> <p><u>Reliability</u> Test-retest reliability = 0.84-0.89</p>	<p>Vignette of "Jim Johnson", a 27-year old man who was hospitalized for schizophrenia 2 years ago</p>	<p><u>Pros</u></p> <ul style="list-style-type: none"> - Its assessment of affective experiences of the stigmatizer, which have previously been underassessed - Its demonstrated reliability 	<p><u>Cons</u></p> <ul style="list-style-type: none"> - May bring awareness to personal emotional responses to MI, which may possibly increase stigma

Table 1. Adult Scales

			(Penn 1994)		(Penn 1994)	- Its validity in demonstrating a predicted pattern of relationships with the construct of previous contact with mentally ill people	
<u>Perceived Devaluation and Discrimination Scale (PDD)</u>	Internalized stigma / Stereotype awareness	12-item scale that assesses stereotype awareness through perceived discrimination and devaluation subscales	“Most people would willingly accept a former psychiatric patient as a close friend” (Strongly Agree to Strongly Disagree)	<u>Validity</u> Alpha = 0.86 to 0.88 <u>Reliability</u> Test-retest reliability = 0.93	“The interview included questions referring to a person in a randomly chosen hypothetical vignette; the vignettes included unlabeled psychiatric case histories describing symptoms that met DSM-IV criteria” (Pattyn et al., 2014)	<u>Pros</u> - measures the attitudes of those with MI towards themselves / the extent to which the public subscribes to stereotyping and discriminating beliefs	<u>Cons</u> - may elicit negative self-attitudes

Table 2. Adolescents-Public

Table 2 Adolescents -Public							
Name	Domain	Definition	Sample Item	Reliability and Validity	Vignettes	Pros	Cons
Peer Mental Health Stigmatization Scale (PMHSS; McKeague et al, 2015)	Attributional Measures	24 items to assess older children and adolescent's attitudes towards peers with mental illness	I believe that children with emotional or behavioural problems are dangerous.	reliability was separated by positive and negative items Reliability for the positive items, alpha = .666 reliability for the negative items, alpha = .806 -for test-retest reliability for the total score on negative items was r = .753 -test re-test reliability for the		-good retest reliability --can be given to children as young as 9 years old -acceptable reliability of the scales	

Table 2. Adolescents-Public

				total score on positive items was r=.645			
Stigma Scale for Receiving Psychological Help, modified (Chandra & Minkovitz, 2006)	Perceived Devaluation and Discrimination	Stigma Scale for Receiving Psychological Help (Komiya et al., 2000) was modified to make it suitable for 8th grade students towards peers with disabilities	Seeing a counselor for emotional problems makes people think you are weird or different	Alpha = .65		-acceptable level of internal consistency	

References:

McKeague, L., Hennessy, E., O'Driscoll, C., & Heary, C. (2015). Peer Mental Health Stigmatization Scale: psychometric properties of a questionnaire for children and adolescents. *Child & Adolescent Mental Health, 20*(3), 163-170.

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Table 3. Children (General Population Towards Children)

Table 3 Children (General Population towards Children)							
Name	Domain	Definition	Sample Item	Reliability and Validity	Vignettes	Pros	Cons
Classroom Social Distance Scale (Horace Mann-Lincoln Institute of School Experimentation, 1957)	Social Distance	7 items to assess the type of relationship children wanted with their peer. Scales deal with general acceptance-rejection, maturity, intelligence, gregariousness, leadership, ascendancy-submission, athletic proficiency	I wouldn't want [target child] in my class	Test-Retest Reliability over two months: 'high short term T-RT by trait ' Fisher's z-transformation, lower limit of rho at .05 level for the least reliable of the 5 scales is .78 and the upper limit for the most reliable is .98 Stability over 3-year period: correlation: .56		High reliability	Scale construction and scoring procedures are time extensive 'the group by which the individual is rated must be determined by the experimenter, who may be dealing with aggregations of individuals rather than a psychological group.
Modified version of Weiss's (1986) paper and- pencil projective figure placement test	Social Distance	Behavioral test to assess children's preference for physical social distance from a child			Students were instructed to assume that the seven objects in their booklets represented		

Table 3. Children (General Population Towards Children)

		<p>with mental illness. Participants were presented with a stick image of the peer sitting at a desk and selected a seat where they would feel relaxed working with him/her.</p>			<p>persons whose names they knew but who were not among their very close friends. They were requested to draw a simple stick figure, representing themselves, at a distance from the other person at which they would feel most comfortable.</p> <p>The seven "attitude" objects were presented randomly . . . measurements were taken of the distance between the heads of the stimulus figure and object figure for each of the drawings. Social distance was measured and rounded to the</p>		
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Table 3. Children (General Population Towards Children)

					nearest tenth of an inch		
Adjective Checklist (Siperstein, 1980)	Semantic Differential and related measures	A list of 32 adjectives to measure children's attitudes towards peers with disabilities	half of the list are positive terms (e.g. smart, neat) and half are negative (e.g. dumb, sloppy)	alpha = .81 (Siperstein, 1980)		-has been used to measure children's attitudes towards people with intellectual disability, autism, obesity, cancer, etc -construct validity for positive or negative value of the adjectives -acceptable internal consistency	
Attitudes about Child Mental Health Questionnaire (ACMHQ; Heflinger et al., 2014)	Opinions about mental illness (with additional Attributional measures, Perceived Devaluation and Discrimination)	45 item questionnaire to assess public stigma and personal stigmatizing attitudes	A child with EBP will do something violent to him/herself	Alpha = .78 to .94 (Heflinger et al., 2014)		-documented levels of perceived public stigma and personal stigmatized attitudes in a rural community, including the	- gaps in construct validity of the ACMHQ - use for diverse populations is uncertain (respondents to the questionnaire were mostly female,

Table 3. Children (General Population Towards Children)

						presence of “stigma by association” for families of children with EBP - subscales demonstrated good internal consistency with the current sample	White and living in rural community)
Revised Attribution Questionnaire (r-AQ) for adolescents (Watson et al., 2004)	Attributional measures	5 item questionnaire to measure dangerousness and attribution in children and adolescents	I am scared of the new student.	alpha = .70 (Pinto et al., 2013)	Participants are asked to respond to each item, on a Likert scale from 1 (strongly disagree) to 7 (strongly agree), after reflecting on the following scenario: “There is a new student in your class who just came from another school. You have heard that this student has a mental illness. (Pinto et al, 2013)	-internal consistency reliability was acceptable	-Cronbach’s alpha coefficient could not be improved by deleting any item -instrument stability is not known

Table 3. Children (General Population Towards Children)

<p>The Shared Activity Questionnaire (SAQ; Morgan, Walker, Bieberich,&Bell, 1996)</p>	<p>Social Distance</p>	<p>24 item questionnaire to measure children's intentions to engage in activities (social, academic, and recreational) towards peers with disabilities</p>	<p>Share my games or books with [name]</p>	<p>alpha =0.95</p>	<p>Videotapes were used to present children with and without a disability--- all saying identical speeches (SAQ; Morgan, Walker, Bieberich,&Bell, 1996)</p>	<p>-good internal consistency reliability -has been used to assess children's intentions towards peers with different types of disabilities, such as autism (Campbell et al., 2004), obesity (Bell and Morgan, 2000), ADHD (Law et al., 2007) -Strong internal consistency reliability has been established</p>	<p>-multidimensionality of the SAQ needs to be established -reliability and validity reported for SAQ with elementary students but less known about middle school students</p>
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Table 3. Children (General Population Towards Children)

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Table 4. Healthcare Providers

Table 4: Healthcare Providers						
Scale	Domain	Definition	Sample Item	Psychometrics	Behavioral, Qual, Quant Vignette	Pros and Cons
Psychiatric Disability Attribution Questionnaire (PDAQ)	Opinions of Mental Illness	Measures an individual's perceptions of six categories of illness: AIDS, cocaine addiction, mental retardation, psychosis, depression, and cancer. The 36-item instrument has two subscales: stability and controllability	'I believe persons with _____ are to blame for their problems' 'I think persons with _____ are likely to benefit from counseling'	Test-retest reliabilities: range from 0.57 for depression to 0.82 for cocaine addiction and 0.83 for AIDS (Corrigan et al., 2003). Depression subscale: poor reliability coefficient makes it invalid for comparisons. Pilot studies conducted to determine the initial subscales of controllability and stability revealed the distinct categories of illness from the results of a factor analysis; Eigenvalues for all values were greater than 1.0 (Corrigan et al., 2003).	Quant	Con: social desirability

Table 4. Healthcare Providers

<p>Attitude to Mental illness Questionnaire (AMIQ)</p>	<p>Perceived Devaluation and Discrimination</p>	<p>Five-item, self-completion scale, used to assess health professionals attitudes towards colleagues (via vignettes) with forensic, schizophrenia and substance use disorder.</p>	<p>Vignette: Philip recently had an acute psychotic episode; he was treated and discharged after a brief hospital admission 1 year ago. Sample Question: 'I would be comfortable if ___ was my colleague at work? [scale; strongly agree +2 to neutral 0, strongly disagree -2, don't know 0]</p>	<p>construct validity: excellent Test-Retest: Pearson's correlation coefficient was 0.702 (n=256) Internal Consistency: (Cronbach's alpha) .933 (n=879) Kendall's tau b=0.563 (P<0.001) Spearman's rank correlation rho=0.704 (P<0.001) indicates good alternative test reliability</p>	<p>Quant, Vignette</p>	<p>Limitations: Social Desirability bias</p>
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Table 4. Healthcare Providers

<p>Mental Illness Clinicians' Attitudes Scale (MICA v2)</p>	<p>Public Stigma</p>	<p>16- item scale developed to assess the attitudes of medical students towards people with mental illness as well and the field of mental healthcare</p> <p>6 anchor points ranging from "strongly agree to strongly disagree". High Score indicates more negative stigmatizing attitudes towards mental illness and pschiatry</p>	<p>"Psychiatry is just as scientific as other fields of medicine" (item 3) and "Psychiatrists know more about the lives of people treated for a mental illness than do family members or friends" (item 6).</p>	<p>Reliability: alpha = 0.79; test-retest = 0.80</p> <p>Convergent validity: assessed using the Mental Disorder Understanding Scale (r = 0.17)</p> <p>Divergent validity: determined using the Complementary Health Beliefs Questionnaire (r = 0.08) and the Marlowe–Crowne Social Desirability Scale (r = - 0.27)</p> <p>Factor analysis yielded seven factors, indicating the need for further research to assess its internal structure (Kassam et al., 2010). Additionally, the sample sizes used for assessing the reliability and validity were small in some cases.</p>		
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Table 4. Healthcare Providers

<p>Mental Illness Clinicians' Attitudes Scale (MICA v4)</p>	<p>Public Stigma</p>	<p>16 item-Modified version of the MICA v2; assesses attitudes towards mental illness of students or staff in any health discipline</p> <p>6-point Likert scale ("strongly agree, agree, somewhat agree, somewhat disagree, disagree, strongly disagree")</p> <p>A single overall score is calculated by summing each individual item where a high overall score indicates more negative stigmatising attitudes, giving a possible range of 16–96.</p>	<p>"Working in the mental health field is just as respectable as other fields of health and social care" (item 3) and "Health/social care staff know more about the lives of people treated for a mental illness than do family members or friends" (item 6).</p>	<p>Internal Consistency: good Cronbach's a 0.72</p> <p>Convergent Validity: adequate significantly correlated with the RIBS scale ($r=0.49$, $p<0.01$, $n=4182$), indicating a moderate relationship</p> <p>significantly correlated with the fear subscale of the ERMIS ($r=0.32$, $p<0.01$, $n=4181$), indicating a low-moderate relationship.</p> <p>Face Validity: reviewed by a group of students and professionals studying and working within the healthcare discipline ($n=5$). Group suggested that the MICA v4 had good face validity, good at measuring clinicians' attitudes, and would be appropriate for students and professionals working in non-mental health setting</p>		
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Table 4. Healthcare Providers

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Psychiatric Disability Attribution Questionnaire:

Table 4. Healthcare Providers

Strauser, D. R., Ciftci, A., & O'Sullivan, D. (2009). Using attribution theory to examine community rehabilitation provider stigma. *International Journal of Rehabilitation Research*, 32(1), 41-47.

Attitude to Mental illness Questionnaire

Luty, J., Fekadu, D., Umoh, O., & Gallagher, J. (2006). Validation of a short instrument to measure stigmatised attitudes towards mental illness. *The Psychiatrist*, 30(7), 257-260.v

Rao, H., Pillay, P., Abraham, A., Luty, J. (2009). A study of stigmatized attitudes towards people with mental health problems among health professionals. *Journal of Psychiatric and Mental Health Nursing*, 16, 279-284

MICA v2:

Kassam, A., Glozier, N., Leese, M., Henderson, C., & Thornicroft, G. (2010). Development and responsiveness of a scale to measure clinicians' attitudes to people with mental illness (medical student version). *Acta Psychiatrica Scandinavica*, 122(2), 153-161.

MICA v4:

Gabbidon, J., Clement, S., van Nieuwenhuizen, A., Kassam, A., Brohan, E., Norman, I., & Thornicroft, G. (2013). Mental Illness: Clinicians' Attitudes (MICA) Scale—Psychometric properties of a version for healthcare students and professionals. *Psychiatry research*, 206(1), 81-87.

Table 5. Police Officers

Table 5. Police Officers							
Name	Domain	Definition	Sample Item	Reliability and Validity	Vignettes	Pros	Cons
Adapted version of the Social Distance Scale (Broussard et al, 2014)	Social Distance	9 items to measure police officers' levels of stigma and desired social distance from people with mental illness	Six months from now, when David (or Susan) is not in crisis, how willing would you be...				
Semantic Differential Measure (Broussard et al, 2014)	Semantic Differential	12 items to measure police officers' attitudes towards those with mental illnesses, regarding 1) understandability (predictable-unpredictable), 2) complexity (simple-complicated), 3) potency (strong-weak and rugged-delicate) 4) activity (warm-cold and fast-slow) and 5)		For each concept, the Pearsonian correlation between pairs of scale means (Illinois data and our 1962 college student data) are: Doctor .96; Me .93; Psychiatrist.95; Average Man .80; Mental Patient.87 (N = 10 or 11 in each case)	Yes. Instead of contrasting scores pertaining to "a person with mental illness" with a comparator, as done in previous research, participants were asked to separately rate the 12 SDM scales in relation to the vignette subjects, David and Susan. Comparators used in		

Table 5. Police Officers

		evaluation (valuable - worthless, clean-dirty, sincere-insincere, safe-dangerous, wise-foolish, and relaxed-tense)		Stability: Pearson correlation for concepts range from .95 to .99 Intraclass correlation: .09-.90	this study were "an average person," "an average police officer," and "yourself."		
Mental Health Attitude Survey for Police (Clayfield et al, 2011)	Community attitudes towards the mentally ill	33 items to measure police attitudes towards people with mental illnesses and the effectiveness of mental health crisis training curricula in improving such attitudes -Questions included items about social restrictiveness, community mental health ideology, the role	EDPs (emotionally disturbed persons) should be isolated from the rest of the community	0.871	Vignette about John/Mary who has schizophrenia---17 questions regarding his vignette, which was derived from the work of Martin et al. (2000)	-initial evidence for the validity of the MHASP and its subscales -initial evidence of good divergent validity	- the attitudes the MHASP assesses may be geared more toward viewing mental illness through a law enforcement lens

Table 5. Police Officers

		the police have in the management of persons with mental illnesses, etc.					
Police officers' view of their role in the mental health system (Cotton, 2004)	Community attitudes towards the mentally ill	6 items, developed by the authors, which asked about views of police officer's roles in dealing/managing the mentally ill in the community	If mental health services were adequate, the police would not have to deal with the mentally ill				-void in research in this area -questions are exploratory in nature -small sample size
N/A unknown (Pinfold et al., 2003)	Community attitudes towards the mentally ill (with additional Social Distance)	pre- and post-assessment questionnaires contained subjective measures with face validity and rating scales to assess participant opinions of people with mental health problems or schizophrenia 12 items were taken from CAMI, modified for use with police. 10 items were taken	Attitude statements that described three themes: 1) beliefs about interaction (e.g. "people with mental health problems are a burden to the police") 2) attitudes to treatment (e.g. "people with mental health problems should be isolated from the rest of the community"). 3) view of mental illness (e.g. "people with	Internal consistency= beliefs about interaction scale, alpha = 0.73 understanding mental illness scale, alpha = 0.68 attitudes to treatment scale, alpha = 0.68		-Internal consistency of the three sub-scales was good:	- may not have been sufficiently sensitive to measure complex attitudinal-behaviour changes -social desirability bias -attitude changes may be affected by ceiling effect -follow-up response rate was

Table 5. Police Officers

		<p>from WPA Alberta pilot site questionnaire tool kit including 4 social distance items.</p> <p>Attitude statements that described three themes: 1) beliefs about interaction 2) attitudes to treatment 3) view of mental illness</p>	<p>mental health problems are weak and only have themselves to blame”).</p>				low
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References:

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Table 5. Police Officers

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Table 6. Consumer Scales- Adult

Table 6. Consumer Scales- Adult							
Name	Domain	Definition	Sample Item	Reliability and Validity	Vignettes	Pros	Cons
<u>Internalized Stigma of Mental Illness Scale (ISMI)</u>	Internalized Stigma	29-item questionnaire that assesses subjective experiences of stigma using a total score and five subscale scores including: alienation, stereotype endorsement, discrimination experiences, social withdrawal, and stigma resistance	“I feel out of place in the world because I have mental illness” (Strongly Disagree, Disagree, Agree, Strongly Agree)	Alpha = 0.90, test-retest reliability = 0.92	(Evans-Lacko, S., Brohan, E., Mojtabai, R., & Thornicroft, G., 2012)	- Has strong psychometric properties - Useful in measuring internalized stigma	- Stigma Resistance subscale has weaker psychometric properties than the other constructs
<u>Perceived Devaluation</u>	Internalized Stigma	12-item scale that assesses	“Most people would willingly	Alpha = 0.86 to 0.88 (sum of	(Ahmed et al., 2015)	- Stigma strongly	- Participants may have

Table 6. Consumer Scales- Adult

<u>and Discrimination Scale (PDD)</u>		stereotype awareness through perceived discrimination and devaluation subscales	accept a former psychiatric patient as a close friend” (Strongly Agree to Strongly Disagree)	scales), test-retest reliability = 0.93		influences self-esteem of people with mental illness, and this scale captures it - Strong follow-up associations	symptoms that influence perception of stigma - Results are generalizable only to mental illness populations
<u>Self-stigma of Mental Illness Scale (SSMIS)</u>	Internalized Stigma	40-item scale that assesses stereotype agreement, stereotype agreement, stereotype self-concurrence, and self-esteem decrement	“I think the public believes most persons with mental illness...”	Alpha = 0.72 to 0.91, test-retest reliability = 0.68 to 0.82	n/a	- This scale shows self-stigma is a multilevel process that begins with awareness of public stigma	- Self-esteem and self-esteem decrement have shared method variance
<u>Self-stigma of Mental Illness Scale Short Version (SSMIS-SF)</u>	Internalized Stigma	20-item scale that assesses stereotype agreement, stereotype agreement, stereotype self-	My identity as a _____ is a burden to me (Strongly Agree to Strongly Disagree)	Alpha = 0.73, 0.75, 0.22, 0.82 (4 subscales)	n/a	- Subscales have good internal consistency - Quality of scales were supported	- Sensitivity to change should be examined - Not as good as the full SSMIS - Some items

Table 6. Consumer Scales- Adult

		concurrency, and self-esteem decrement					are offensive to people with mental illness
<u>Depression Self-stigma Scale (DSSS)</u>	Internalized Stigma	32-item scale that assesses general self-stigma, secrecy, public stigma, treatment of stigma, and experience of stigma	Others view me as unable to care for myself because I am depressed (Completely Disagree to Completely Agree)	Alpha = 0.79 to 0.93 (for each subscale)	n/a	- Related, but distinct constructs	- Limited by the single item assessments of self-reported treatment seeking
<u>Self-stigma of Depression Scale (SSDS)</u>	Internalized Stigma	16-item scale that assesses shame, self-blame, help-seeking inhibition, and social inadequacy	Participant asked how they would think of themselves if they were depressed... "Feel ashamed" (Strongly agree to Strongly disagree)	Alpha = 0.78 to 0.83, test-retest reliability = 0.49 to 0.63	(Barney, L. J., Griffiths, K. M., Christensen, H., & Jorm, A. F. 2010)	- First stigma scale for depression that focuses on self-stigma - Adequate construct validity, internal consistency, and test-retest reliability	- Lack of other self-stigma measures to compare to for validation
<u>The Inventory of</u>	Internalized Stigma	10-item questionnaire	"Do you think that people think less	Stigma experiences	n/a	- An important	- More research is

Table 6. Consumer Scales- Adult

<u>Stigmatizing Experiences (ISE)</u>		that assesses perceived stigma, experienced stigma, social withdrawal, and impact of stigma	of those with a mental illness?" (Never to Always)	scale alpha = 0.83, stigma impact scale alpha = 0.91		addition to the field of stigma because it lacks measurement tools - Measures changes over time	needed to assess this scale's full utility
<u>Self-esteem and Stigma Questionnaire (SESQ)</u>	Internalized Stigma	14-item questionnaire that assesses feelings of stigmatization adapted from PDD, self-esteem, and confidence in ability to complete tasks	Most people would willingly accept a manic depressive sufferer as a friend (Strongly agree to Strongly disagree)	Alpha = 0.80, stigma scale alpha = 0.79, self-esteem scale alpha = 0.71, test-retest reliability: stigma scale = 0.63, self-esteem scale = 0.71	n/a	- Mood did not affect responses to stigmatization questions - Offers support to the view that stigma is linked to self-esteem	- Responses on the self-esteem items is variable, and can be mood related
<u>Consumer Experiences of Stigma Questionnaire</u>	Experienced Discrimination	21-item questionnaire that assesses degree to which	I have been treated with kindness and sympathy by law	Alpha = 0.78	n/a	- Questions are sensitive to stigma and discrimination	- Can be applied to populations with more

Table 6. Consumer Scales- Adult

<u>(CESQ)</u>		an individual has perceived negative social reactions based on their mental illness through subscales of experiences of stigma and experiences of discrimination	enforcement officers when they learned that I am a consumer (Never to Very Often)			felt by mental health consumers	severe mental illness, not less severe
<u>Rejection Experiences Scale (RES)</u>	Experienced Discrimination	11-item scale that assesses rejection experiences based on Self-reported Rejection Experiences Scale and 5 items from CESQ	Did some of your friends treat you differently after you have been a patient in a mental hospital? (Never to Very Often)	Alpha = 0.85	n/a	- Positively correlated to the PDD	- Scale would be more complete if it included another answer for being turned down for a job because some may not have applied for one
<u>Self-reported Experiences of Rejection (SRER)</u>	Experienced Discrimination	12-item questionnaire that assesses rejection experiences by	“Did some of your friends treat you differently after you have been a patient in a	Alpha = 0.80	n/a	- “Ever” wording does not detract from the ability to	- Includes items that ask if the participant “ever”

Table 6. Consumer Scales- Adult

		including experiences related to mental illness and experiences related to drug use	mental hospital?" (Yes or No)			interpret correlations - Scale can indicate an enduring effect of stigma, meaning time of rejections does not affect the association	experienced a particular type of rejection, precluding a valid decrease in mean levels of rejection over time - Responses may be confounded by symptoms
<u>Stigma Scale (SS)</u>	Experienced Discrimination	28-item scale that assesses experience of stigma, disclosure, and positive aspects	I have been discriminated against in education because of my mental health problems (Strongly Agree to Strongly Disagree)	Alpha = 0.87, test-retest reliability = 0.49 to 0.71	n/a	- Content of stigma scale came from qualitative research from patients' experiences of mental illness	- Didn't examine variations in clinical characteristics of participants
<u>MacArthur Foundation Midlife Development in the United States</u>	Experienced Discrimination	22-item questionnaire that assesses major discrimination and day to day	"How many times in your life have you been discriminated against in each of the following ways	Alpha = 0.87	n/a	- Partially accounts for associations between income and mental health	- Does not account for associations between race/ethnicity, gender, or

Table 6. Consumer Scales- Adult

(MIDUS)		discrimination (experienced discrimination)	because of such things as your race, ethnicity, gender, age, religion, physical appearance, sexual orientation, or other characteristics?" (Enter a number)			- Showed that perceived discrimination is an important factor in mental health	education with mental health
<u>Discrimination and Stigma Scale (DISC)</u>	Experienced Discrimination (with additional Internalized Stigma items)	36-item scale that assesses anticipated discrimination and experienced discrimination	Endorsing items of experienced discrimination such as "In finding a job"	Alpha = 0.78	n/a	- Good acceptability, reliability, validity, precision, and feasibility - Qualitative element is a strength	- Included non-applicable responses for 4 items - The Stopping Self, Overcoming Stigma, and Positive Treatment subscales require further modification
<u>Experiences of Discrimination Scale (EDS)</u>	Experienced Discrimination	17-item scale that assesses specific settings of discrimination	Endorsing items of experience of discrimination such as "Getting	Alpha = 0.81	(Krieger, N., Smith, K., Naishadham, D., Hartman,	- Participants report quality of life, social interaction,	- Scale may only capture the most stressful

Table 6. Consumer Scales- Adult

		and stress levels of each setting	housing” (4 or more times to Never)		C., & Barbeau, E. M. 2005)	and symptoms consistent with discrimination experiences - Allows for distinct scores for number of settings in which discrimination has occurred and the level of stress	discrimination participants encounter - It is not possible to separate setting and stress level
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Table 7. Consumer Scales- Adolescents

Table 7 Consumer-- Adolescents							
Name	Domain	Definition	Sample Item	Reliability and Validity	Vignettes	Pros	Cons
Five-item Self Stigma, adapted (Moses, 2009)	Mental Health Consumers' Internalized Stigma (with additional Stigma-Related feelings)	5 items, to measure adolescents' sense of shame, embarrassment, and worry about others' responses to their mental health problems	How often do you feel embarrassed about your behavioral or emotional issues?	Alpha = 0.81 interrater reliability = .79 to .90 (Moses, 2009)		-good preliminary construct validity and internal reliability -interrater reliability was high	-sample size limited testing of discriminant validity
Seven-Item Secrecy Scale (Moses, 2009)	Coping Orientation	7 items, to measure the extent to which the adolescent feels they need to conceal their mental health problems/treatment from others	I often fear that someone will tell others about my mental health problems without my	Alpha = 0.84 interrater reliability = .79 to .90 (Moses, 2009)		-good preliminary construct validity and internal reliability -interrater reliability	-sample size limited testing of discriminant validity

Table 7. Consumer Scales- Adolescents

			permission			was high	
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Table 8. Consumer Scales-Children

Table 8. Consumer-- Children							
Name	Domain	Definition	Sample Item	Reliability and Validity	Vignettes	Pros	Cons
The ADHD stigma questionnaire (ASQ) (Kellison et al., 2010)	Mental Health Consumers' Internalized Stigma (with additional Perceived Devaluation - Discrimination)	26 item adaptation of the HIV stigma scale to measure personalized stigma, disclosure concerns, negative self-image, and concern with public attitudes	People's attitudes about ADHD may make persons with ADHD feel worse about themselves.	alpha =0.96 test retest ICC for two-weeks = 0.71		-good internal consistency -test-retest stability was adequate for all three subscales -construct validity was supported	-because HIV stigma scale was adapted, did not augment measure with additional questions that may be relevant to ADHD
The Southampton ADHD medication behavior and attitude (SAMBA) scale -	Mental Health Consumers' Internalized Stigma (with additional Perceived Devaluation-	16 items that measure child's perceive levels of stigma (being made fun of for taking ADHD pills, feeling	Other children think I am crazy because I take ADHD pills	alpha > .7		-parent and child scores were correlated	

Table 8. Consumer Scales-Children

<p>child version (Harpur et al., 2008)</p>	<p>Discrimination)</p>	<p>different from other children, being thought of as crazy, not feeling wanted as a friend). Also measured perceived costs of medication, perceived benefits of medication, resistance.</p>					
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Table 9. Caregiver Measures

Table 1

Table 9. Caregivers Measures							
Name	Domain	Definition	Sample Item	Reliability and Validity	Vignettes	Pros	Cons
Devaluation of Consumers scale (Struening et al., 2001)	Perceived Devaluation and Discrimination	8 items to measure caregivers' responses that measure devaluation of consumers with mental illness, including perceived dangerousness, consumer's loss of status, etc. Three factors: 1) status reduction 2) role restriction 3) friendship refusal	Most people think that a person with mental illness is dangerous and unpredictable	internal consistency reliability .82		the three factors in the scale are conceptually different, but the eight items were modestly to moderately correlated and had a good internal consistency	
The	Opinions about	27 items that	Other children	alpha > .7 for all		-parent and	

Table 9. Caregiver Measures

<p>Southampton ADHD medication behavior and attitude (SAMBA) scale - parent version (Harpur et al., 2008)</p>	<p>mental illness (with additional Perceived Devaluation and Discrimination)</p>	<p>measure child stigma (perceived levels of stigma toward their child) and parental stigma (perceived levels of stigma as a parent)</p> <p>Also measured attitudes towards perceived costs and benefits of medication, child resistance, dosing flexibility, and parent medication related inconsistency</p>	<p>make fun of my child because they take ADHD pills</p> <p>I am concerned that people think I am a bad parent because my child takes ADHD pills.</p>	<p>scales except inconsistency in using medication (alpha = .67)</p>		<p>child scores were correlated</p>	
<p>Devaluation of Consumer Families scale (Struening et al., 2001)</p>	<p>Perceived Devaluation and Discrimination</p>	<p>7 items to measure the extent to which caregivers' believe that the</p>	<p>Most people in my community would rather not be friends with families that</p>	<p>internal consistency reliability .71</p>		<p>-internal consistency reliability was acceptable</p>	<p>-Cronbach's alpha coefficient could not be improved by</p>

Table 9. Caregiver Measures

		public devalues families that have at least one member with a mental illness, such as loss of status, community rejection, etc. Three factors: 1) community rejection 2) causal attribution 3) uncaring parents	have a relative who is mentally ill living with them				deleting any item -instrument stability is not known
Stigma-by-Association Scale (Pryor et al., 2012)	Stigma by Association	28 items that measures participants' cognitive, emotional, and behavioral reactions to being related to someone with a stigmatized condition		Alpha = 0.94			

Table 9. Caregiver Measures

Affiliate Stigma Scale (ASS; Mak and Cheung, 2008)	Affiliate Stigma	22 items to assess caregivers' stress, burden, positive perceptions	"As one of my family members is a person with mental illness / person with intellectual disability, I feel that I am inferior to others	0.93		-good predictive validity and internal consistency	--scale was only validated among caregivers of people with intellectual disability and caregivers of people with mental illness
Experience of Caregiving Inventory (ECI; Szmukler et al., 1996)	Emotional Reaction to mental illness scale	66 item questionnaire to measure caregivers' positive and negative beliefs about caregiving 8 negative appraisal subscales, including 1)difficult behaviors 2) negative	During the past month how often have you thought about: whether she will ever get well, feeling the stigma of having a mentally ill relative	Alpha = .74 to .91		- Demonstrated content validity	

Table 9. Caregiver Measures

		symptoms 3) stigma 4) problems with services 5) effects on family 6) need to back up 7) dependency 8) loss					
Attitudes toward Schizophrenia Questionnaire for Relatives (ASQR; Caqueo-Urizar et al., 2011)	Emotional Reaction to mental illness scale	9 items to measure attitudes of family members toward schizophrenia, considering the three attitude components: cognitive, behavioral, and affective	"I avoid engaging in conversation with my relative"	Alphas ranged between .89 and .90		-Construct validity reported adequate fit	-small sample size undermines validation process

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