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Determinants of mental illness stigma for adolescents discharged from psychiatric hospitalization

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ABSTRACT

Little is known about the factors that increase the risk for enacted mental illness stigma (i.e. rejection, devaluation and exclusion) as perceived by the stigmatized person. This is particularly true for the population of adolescents diagnosed with a mental illness. The aim of this study was to address this question and examine select social and clinical factors that predict enacted stigma (self-reported) with research that follows eighty American adolescents for 6 months following a first psychiatric hospitalization. Drawing on social identity theory, and research on stigma-threatening environments, social group identification and social support, this study tested four hypotheses: affiliation or identification with higher status and lower status peers predicts more and less stigma respectively (H1); a greater and more supportive social network, and more perceived family support predict less stigma (H2); greater severity of internalizing and externalizing symptoms predicts more stigma (H3); and poorer school functioning predicts more stigma (H4). Results indicated that about 70% of adolescents reported experiencing enacted stigma (at 6 months); disrespect or devaluation was more common than outright social rejection. Using OLS regression analyses, the results provided partial support for H1, H3 and H4, while H2 was not supported. The baseline factors found to be most predictive of enacted stigma ratings at 6-months were: affiliating with more friends with mental health problems, identifying with the 'populars' peer group, higher internalizing symptom ratings, and self-reported disciplinary problems at school. These four factors remained significant when controlling for initial enacted stigma ratings, pointing to their importance in determining changes in social stigma experiences in the follow-up period. They also remained significant when controlling for perceived public stigma ratings at follow-up, indicating that the findings were not due to generalized perceptions of stigma of youth with mental illness.

Introduction

Youth treated for psychiatric disorders are at risk of experiencing mental illness stigma, typically expressed as devaluation, teasing, under-estimation, and social exclusion by peers, teachers, and even by family members (Bicksler, 2002; Chandra & Minkovitz, 2007; Elkington et al., 2012; Huphrey, Storch, & Geffken, 2007; Hutzler, Fliess, Chacham, & Van den Auweele, 2002; Moses, 2010b). Behaviors associated with psychiatric conditions, diagnostic labels, and association with treatment all incur stigma. For instance, a recent prospective study finds that depression symptoms in young adolescents predict more social helplessness (e.g., little initiative, lack of conflict resolution), which, in turn, predicts more teacher-observed peer rejection and peer neglect (Agoston & Rudolph, 2013). A number of experimental studies demonstrate the power of mental illness labels in tainting peers' perceptions of and subsequent behavior toward the labeled child (Juvonen, 1991; Milich, McAninch, & Harris, 1992). Unfortunately, peer denigration and rejection exact a heavy price; a large body of literature attests to the damaging consequences of peer rejection in adolescence for long-term mental and physical health (Boulard, Quertemont, Gauthier, & Born, 2012; Graham, Bellmore, & Juvonen, 2003; Masten et al., 2009). The far smaller body of literature specifically focused on mental illness stigma in childhood and adolescence indicates that stigma generates emotional pain that adds substantially to the burden of illness (for a review, see Hinshaw, 2005). Moreover, the anticipation of stigma from peersis very costly as it keeps youth from seeking help when needed (Draucker, 2005; Yap, Wright, & Jorm, 2011). For these reasons, a better understanding of the social dynamics of mental illness stigma in adolescence is vital.

Although the lion's share of research on mental illness stigma and its effects has focused on adult mental health (MH)

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consumers (Hinshaw, 2005; Mukolo, Heflinger, & Wallston, 2010), in recent years, public awareness of the high rates of diagnosable or treated MH conditions among youth (Burnett-Zeigler et al., 2012; Kessler et al., 2012) has led to greater interest in exploring stigma related to childhood mental illness, both in terms of public attitudes and the perspectives of young MH consumers (Hinshaw, 2005). Still, little is known about the stigma experiences of adolescent MH consumers. Even less is known about the individual attributes and social conditions that relate to more/less stigma.

Generally, the coherence of the literature on mental illness stigma is hampered by the use of the concept "stigma" to refer to different aspects of this experience. The most commonly studied aspects of stigma involve assessing the public's negative attitudes toward individuals with mental illnesses (e.g., as weak, dangerous, socially unacceptable) and desire to maintain social distance (termed public stigma) (Coleman, Walker, Lee, Friesen, & Squire, 2009; Martin, Pescosolido, Olafsdottir, & McLeod, 2007). Also, some studies specifically focus on mental health consumers' own *perceptions of* public stigma directed toward people with mental illness (perceived public stigma); most focus on adults, but several do target the perceptions of young people with a mental illness (Draucker, 2005; Meredith et al., 2009; Walker-Noack, Corkum, Elik, & Fearon, 2013). The least commonly studied aspect of stigma, and the focus of this research, concerns experiences of outright degradation, social rejection or discriminating behavior directed at oneself (termed enacted stigma). The study of stigma is further complicated by recent recognition that stigma-related attitudes and behaviors vary by the type of disorder: psychotic and substance use disorders are often associated with stereotypes of dangerousness and are most stigmatized; anxiety and depressive disorders are often associated with notions of 'weakness, not sickness'; while ADHD and other disruptive behavior often engender anger or irritation and desire for social and physical distance (Jorm & Wright, 2008; O'Driscoll, Heary, Hennessy, & McKeague, 2012; Pescosolido, Perry, Martin, McLeod, & Jensen, 2007; Reavley & Jorm, 2011; Yap et al., 2011).

This six-month follow-up study of adolescents discharged from their first psychiatric hospitalization, an event that has historically been highly stigmatized (Verhaeghe, Bracke, & Bruynooghe, 2007), addressed the question of *enacted stigma* or youths' personal experiences of devaluation and social rejection. To address the gap in knowledge of individual and social factors that relate to enacted stigma, we draw on insights from social identity theory, and research on threatening environments, and group identification to develop hypotheses regarding the influence of social affiliation and identification, social support, clinical attributes, and school-functioning factors that may relate to mental illness stigma. As the majority of participants in this study have been diagnosed with a mood disorder, the literature reviewed here focuses on depression and bipolar disorders rather than the more common ADHD literature (e.g., Bussing, Zima, & Perwien, 2000; Harris, Milich, Corbitt, Hoover, & Brady, 1992; Kellison, Bussing, Bell, & Garvan, 2010).

Public stigma

The public tends to view youth with mental illnesses including depression and bipolar disorder unfavorably, expressing a punitive or distancing response toward these youth (Martin et al., 2007; Pescosolido et al., 2007). Likewise, children, adolescents, and young adults, the primary reference group for young MH consumers (Crosnoe & McNeely, 2008), also tend to express more negative attitudes, including more blaming attributions and avoidance toward peers with a mental illness relative to peers with a physical health condition (Adler & Wahl, 1998; Coleman et al., 2009; Law, Sinclair, & Fraser, 2007; Milich et al., 1992; O'Driscoll et al., 2012). Studies comparing youths' attitudes toward ADHD vs. depression find depression to be more stigmatized (Coleman et al., 2009; O'Driscoll et al., 2012; Walker, Coleman, Lee, Squire, & Friesen, 2008). Studies probing such attitudes indicate that youth often have little accurate knowledge about depression and other MH conditions, and that they are quite susceptible to adopting peers' stigmatizing attitudes (Pinto-Foltz & Logsdon, 2009; Wahl, Susin, Lax, Kaplan, & Zatina, 2012; Wisdom & Agnor, 2007). At the same time, the absolute levels of reported negative attitudes toward 'mental illness' and desire for social distance among youth are modest across studies (e.g., Reavley & Jorm, 2011; Wahl et al., 2012).

Research is limited on the frequency or nature of mental illness stigma experienced by youth diagnosed with severe MH conditions. The few available studies yield a mixed and nuanced story. Qualitative research indicates that youth identified with MH illnesses do report outright rejection or negative changes in some social and family relationships upon disclosure of a diagnosis or treatment (e.g., mistrust, under-estimation); but they also report receiving support and acceptance in the same relationships or from others (Elkington et al., 2012; Moses, 2010b). Youth with anxiety and mood disorders tend to report less stigma and more support in their personal relationships relative to peers with psychotic or behavioral disorders (Elkington et al., 2012). In any case, youth with a variety of MH conditions including depression often anticipate or fear social rejection should peers learn about their condition/symptoms (Marcell & Halpern-Felsher, 2007; Moses, 2011; Wisdom & Agnor, 2007).

An important question yet to be addressed concerns the individual and clinical attributes and social or environmental conditions that make some youth more likely to experience enacted stigma than others (Mukolo et al., 2010). As noted above, some conditions generate more negative, stereotyped attitudes than others. Also, individuals with less first-hand experience with mental illness are more inclined to report stigmatizing attitudes (Angermeyer & Matschinger, 2003; Boyd, Katz, Link, & Phelan, 2010; Couture & Penn, 2003; Jorm & Wright, 2008). However, we have very little information about the individual and social circumstances that that make adolescent MH consumers themselves more likely to report experiencing enacted stigma. Because the consequences of social ostracism are severe for adolescents (Bagwell, Newcomb, & Bukowski, 1998; Brown & Dietz, 2009; Crosnoe & McNeely, 2008; Sussman, Pokhrel, Ashmore, & Brown, 2007), understanding the social context of mental illness stigma is particularly critical for this age population.

The social context of stigma

Researchers have examined the qualities that make environments more stigma-"threatening" (i.e. signal the potential for being devalued or discriminated against). Generally, settings that are heterogeneous, with the stigmatized individuals comprising a small minority can create a sense of being outnumbered and 'otherness'; such environments lead to greater preoccupation with one's social status and the stereotypes associated with it (Inzlicht & Good, 2006). This dynamic is particularly true in contexts that have narrow standards for success (e.g., intelligence, beauty, artistic talent) (Inzlicht & Good, 2006; Murphy & Taylor, 2012). For example, public school populations often hold values that mirror the existing social structure and privilege 'normalcy'. This can be experienced as a threatening environment by a student who struggles with a mental illness or a learning disability (McNulty & Roseboro, 2009).

An important feature of adolescents' social environment involves affiliation and identification with social groups or "peer crowds", which are "reputation-based entities that reflect important distinctions within the peer system" (Brown, Von Bank, & Steinberg, 2008, p. 1164) that provide adolescents with social categories used to evaluate themselves and others (Brown & Dietz, 2009; Sussman et al., 2007). Though the character, boundaries, and status attributed to social groups may vary across settings (Irons & Gilbert, 2005; Sussman et al., 2007), groups such as athletes or jocks, populars, druggies or partiers, artistics, nerds, and brains (to name a few) often reveal a social hierarchy (Sussman et al., 2007). Higher status is typically bestowed upon populars and athletes/jocks, and lower status is often relegated "deviants" such as druggies, delinquents or outcasts (Irons & Gilbert, 2005; Sussman et al., 2007). Social status is tied to meaningful outcomes (Brown, 2011; Prinstein & La Greca, 2002); members affiliated with lower status groups have reported lower life satisfaction, self-esteem, and academic achievement, and higher rates of problem behavior, emotional distress and even poorer health outcomes relative to higher status, popular students (Doornwaard, Branje, Meeus, & ter Bogt, 2012; Flory, Glass, Langley, & Hankin, 2011; Heilbron & Prinstein, 2010). Given their influential role in moderating risk, peer group affiliations and identifications may be quite important in increasing or decreasing exposure to stigma for youth who experience mental illness.

Social identity theory (Tajfel & Turner, 2004) is a useful framework for exploring the potential role of group identification in mental illness stigma. One main premise of this theory is that people use social group memberships as a basis for self-evaluation and identity. A second premise is that because people are intrinsically motivated to develop and maintain a positive self-concept, individuals make choices about social behavior or affiliation and group identification that promote a positive self-concept and avoid social degradation or discrimination (Crocker & Garcia, 2006). Various strategies may be invoked by in-group members to achieve or maintain a 'positive distinctiveness' (Schmader & Lickel, 2006). For instance, members can redefine the group's value by reframing the group attributes as positive. This is exemplified by youth with ADHD who define their condition as something that makes them 'different' or even *better* (exciting, interesting) rather than 'bad' or inferior (Gajaria, Yeung, Goodale, & Charach, 2011). In effort to maintain a positive group identity, members may distance themselves and reject those who are associated with a negative stereotype and represent a collective threat to members' social status and positive sense of self (Schmader & Lickel, 2006).

There are various possibilities for how social group identification and affiliation may affect stigma experiences for adolescent MH consumers just discharged from inpatient treatment. Youth who socially identify with higher status or normative peer groups, such as the popular or athletic groups, may experience more stigmatization from in-group members, who see their status threatened by someone with deviant behavior or a label. Youth identifying with a higher status group may also be apprehensive about stigma because of the perceived discrepancy between the group status and their current status (i.e. an ex- patient in a psychiatric unit).

On the other hand, adolescents who identify and affiliate with peers who also struggle with MH problems or engage in 'deviant' behavior such as 'getting in trouble' (henceforth termed "*alternative status peer groups*") may experience *less* interpersonal stigma if members are less inclined to value conformity or 'buy into' common stereotypes. In support of this possibility, a recent study found that greater group identification in members of an MH support group predicted more 'stigma resistance, defined as rejection of stereotypes regarding mental illness and positive self-image as a MH consumer (Crabtree, Haslam, Postmes, & Haslam, 2010). Some studies have found that adolescents who befriend peers with similar MH problems report a greater sense of social acceptance (Kranke, Floersch, Townsend, & Munson, 2010; Moses, 2010a,b) and less apprehension about stigma (Moses, 2011). Network "homophily", or the tendency of individuals to associate and identify with similar others, may be protective in this way.

At the same time, members of alternative status groups may feel particularly vulnerable and concerned about their own status and thus seek to distance themselves from peers considered comparatively "crazier" (Elkington et al., 2012). This may be especially true if youth receiving mental health services have less stable and strongly identified social groupings (McLeod & Uemura, 2012). In such contexts, inpatient psychiatric treatment of a friend can generate "stereotype threat", or concerns about confirming a negative stereotype about the group, causing in-group members to distance themselves (Quinn, 2006; Steele, Spencer, & Aronson, 2002). In sum, both positive and inverse associations between alternative status peer group affiliation and enacted stigma are plausible. Based on the weight of available data, we hypothesized that youth with greater identification and affiliation with alternative peer groups would report less stigma, while those who identify with higher social status groups would report more stigma.

Other relevant social network and individual characteristics

Social network characteristics such as size and quality of support may also be relevant for understanding why some adolescent MH consumers report more or less enacted mental illness stigma. Research points to social support as protective against stigma and its consequences. Mueller et al. (2006) found that social support predicted less perceived stigma for adults hospitalized with severe mental illness with a recent onset of illness. Peer support may also buffer the negative effects of perceived stigma on individuals' self-esteem (Verhaeghe, Bracke, & Bruynooghe). Otherwise, research not specific to stigma suggests that a larger primary support network predicts better MH outcomes among clinical and non-clinical populations (Brugha et al., 2005; Furlanetto & Stefanello, 2011), and greater receptivity toward MH help-seeking among youth (Lindsey, Joe, & Nebbitt, 2010). Based on this literature, we expected more perceived social support and a larger friend network size would to be associated with lower rates of enacted stigma.

Clinical attributes and overall functioning may also relate to enacted stigma for adolescent MH consumers. In this study, we examined the level of clinical symptoms (at hospital discharge), hypothesizing that greater severity of symptoms render the MH condition more visible and increase vulnerability to social rejection or devaluation. This hypothesis draws on research showing that depressed youth evidenced social skill deficits (Segrin, 2000) and were less well liked by their peers (Zimmer-Gembeck, Waters, & Kindermann, 2010). Even when treatment of mood disorders results in some symptom relief for adolescents, they still evidenced more impaired social functioning relative to normal controls (Olsen et al., 2012; Renouf, Kovacs, & Mukerji, 1997). Furthermore, we examined whether youth who have challenges in school, including low grades, disciplinary problems and special learning needs would experience more enacted stigma. Because such school-related difficulties can lead to shaming or other types of negative attention (Boulard et al., 2012; Eccleston & Major, 2008), we hypothesized that lower school functioning would be associated with more enacted stigma.

Socio-demographic characteristics including age, gender, race and socio-economic status could potentially be significant predictors of exposure or reactions to enacted mental illness stigma, but the data are scarce and findings across studies are inconsistent.

In clinical populations of adolescents diagnosed with depression, some have found no effects of gender and age on perceptions of public stigma (Munson, Floersch, & Townsend, 2009; Rose, Joe, & Lindsey, 2011) or in experiences with enacted stigma (Elkington et al., 2012). Others have found that older youth report more public stigma related to MH treatment (Moses, 2009) and that boys report low levels of peer acceptance and support (Lindsey et al., 2010) and more perceived public stigma (Calear, Griffiths, & Christensen, 2011; Chandra & Minkovitz, 2006; Lindsey et al., 2010). One study, specifically looking at ethnic differences in perceived stigma among adolescent MH consumers, found that ethnic/racial minorities perceived *less* enacted stigma relative to majority peers (Moses, 2009). Given these inconsistent findings and lack of theoretical basis, no specific hypotheses were developed regarding socio-demographic characteristics and enacted stigma.

This study

This study builds on previous work focused on *anticipatory* stigma at hospital discharge (Moses, 2011) to focus on concrete experiences of enacted stigma within six months of discharge. We address two primary research questions. First, to what extent do adolescents report experiences of rejection or devaluation (enacted stigma) six months after a first psychiatric hospitalization? Second, to what extent is the level of enacted stigma predicted by social support, social affiliation, symptoms, and school functioning at discharge from the hospital? For this second question, we developed four hypotheses:

H1—Social Affiliation and Identification: Affiliation and identification with higher status peers predict more enacted stigma, while identifying/affiliating with lower status peers predict less reported stigma.
H2—Social Support: A larger, more supportive social network and a more supportive family predict less enacted stigma.
H3—Clinical: Adolescents reporting greater severity of internalizing and externalizing symptoms will report more enacted stigma.
H4—School Functioning: Lower academic achievement, disciplinary problems at school and a formal learning disability predict more enacted stigma.

Recognizing that it is difficult to tease apart general perceptions of broad public stigma toward mental illness and perceptions of stigma enacted toward oneself, we also explore if the above factors contribute to enacted stigma while controlling for perceived public stigma.

Method

Participants

Study participants were 80 adolescents, aged 13–18, who voluntarily participated in two home interviews following their first psychiatric hospitalization in a child and adolescent program of a non-profit hospital in a mid-sized city in Wisconsin, U.S.A. The first (Time 1) interview occurred within 7 days of discharge and the follow-up (Time 2) interview took place 6 months later. As shown in Table 2, the average age of the sample at Time 1 was 15.3 years (SD = 1.6), and a majority were Caucasian and female. The sample was mostly middle class: only 15% of families were receiving state Medical Assistance, the majority of parents had some college education or more (67% fathers and 77% mothers). A majority of adolescents (73.8%) were hospitalized because of suicidal ideation or a suicide attempt, and the average length of stay was 7.5 days (SD = 3.6, range 3–28 days). Discharge diagnoses on record indicate that over half (54.9%) had comorbid conditions; most were diagnosed with a depressive disorder (66.7%); other diagnoses included: an anxiety disorder (32.4%), mood disorder NOS (18.6%), ADH/D (13.7%) PTSD (8.8%), bipolar disorder (5.9%), substance use disorder (6.9%), obsessive-compulsive disorder (2.9%), and other (7.8%). Few (6.9%) were diagnosed with oppositional defiant or conduct disorders.

The sample included in Time 1 interviews represents 30.2% of youth who met study eligibility criteria (102 out of 265) during the study period (6/2007 – 7/2010). The study retention rate for Time 2 interviews was 78.4% (80 out of 102).

Procedures

English-speaking adolescents ages 13–18 years were eligible to participate in the study if this was their first psychiatric hospitalization. Patients diagnosed with a pervasive developmental disorder or mental retardation, or youth who were floridly psychotic were excluded from the study. Adolescent inpatients and parents (or guardians) were introduced to the study by staff during hospital admission; those who expressed an interest signed an initial release providing the study team with contact information. Parents willing to let their son/daughter participate underwent informed consent while the youth was hospitalized. Procedures to elicit informed assent from the youth took place after discharge and prior to engaging in the first interview.

Participants were re-contacted after several months to schedule a six-month (Time 2) interview. All interviews followed a semi-structured interview protocol that included open-ended questions and quantitative rating scales. All participants and parents/guardians also signed HPPA forms allowing the study team to access certain information from their online hospital records. Interviews lasted approximately 2 hours and participants were compensated $30 and $35 respectively for the first and second interviews. This study received ethics approval from the University of Wisconsin and Meriter Hospital IRB committees.

Predictor measures at time 1

Social context

Family support. Quality of family support was measured using the General Functioning subscale of the Family Assessment Device (Miller, Epstein, Bishop, & Keitner, 1985). An example item is: “In times of crisis, we can turn to each other for support.” Twelve items are rated on a 5-point scale, from strongly disagree to strongly agree ($\alpha = .88$).

Quality of relationship with friends. This scale includes 9 items from the Inventory of Parent and Peer Attachment (Armsden & Greenberg, 1987), assessing the level of communication, trust and alienation with one’s group of friends as a whole. An example item is: “I can count on my friends when things go wrong.” Items were rated on a 5 point frequency scale, almost never–almost always ($\alpha = .87$).

Number of friends. Participants were asked to list up to 10 people whom they considered as a friend in the past few months, scored 0 to 10.

Peer group identification. Participants were asked to identify the peer groups (they) identify with most. They responded yes or no to 12 different adolescent group types including popular, athletic, goth. This measure was developed for this study based on informal interviews with several (non-clinical) high-school students. For this

Table 1
Adolescents' endorsement of enacted stigma items following hospital discharge (Time 1) and at 6-month follow-up (Time 2).

	Time 1% (*N*)	Time 2% (*N*)
1. Have people used the fact that you are in treatment to hurt your feelings?	25% (20)	40% (32)
2. Did one or more of your friends reject you after they found out you were getting treatment?	10% (8)	12.5% (10)
3. Do you ever feel like people look down on you when they found out that you are in treatment?	50% (40)	45% (36)
4. Do you feel like you are disrespected by others because of your emotional or behavioral issues?	42.5% (34)	41.3% (33)
5. Do you feel that others have low expectations of you because of your mental health issues?	38.8% (31)	37.5% (30)
Participants reporting perceiving no enacted stigma (0)	26.6% (21)	30.4% (24)
Average# of items endorsed: M (SD) [0–5]	1.7 (1.4)	1.8 (1.6)

study, we focus on 3 groups: a) peers who are popular in school, b) athletic peers and c) kids who get into trouble.

Number of friends with MH problems. An additional question asked about each friend listed by the participant was: Does ____ have MH issues (like depression, anxiety, hyperactivity, and aggression)? The sum of friends reported as "yes" to this item was analyzed.

Clinical symptoms

Severity of symptoms. To measure overall level of symptoms at Time 1 interviews, we used the two broadband subscales of the Youth-Self Report (Achenbach, 1991), a widely used and validated self-report questionnaire designed for use with adolescents between the ages of 12 and 18: *Internalizing Problems* includes the narrow-band scales of Withdrawn, Somatic Complaints, and Anxious/Depressed, and *Externalizing Problems* includes the narrowband subscales of Aggressive Behavior, and Delinquent Behavior). Each item is rated 0 (rarely or never), 1 (sometimes) or 2 (often); a higher score means more emotional/behavioral problems.

School functioning

Grade achievement. Participants were asked:"Currently or in the most recent period, what sort of grades do you get?" The response options included : (1) Mostly D's and F's, (2) Mostly D's, (3) Mostly C's and D's, (4) Mostly C's, (5) Mostly B's and C's, (6) Mostly B's, (7), Mostly A's and B's, and (8) Mostly A's.

School disciplinary problems. One item asking: "In the past few weeks before you went into the hospital, did you have disciplinary problems at school?" was rated Yes or No.

Special learning needs. In the hospital admission interview, the guardian and youth are asked if the child has special learning needs or a learning disability [rated Yes/No].

Time 2 outcome and control measures

Enacted social stigma

This scale of 5 items measures participants' reported experiences with social exclusion and devaluation by others on account of their MH problems and treatment. It was administered in both interviews (Time 1 measure is used as a control and Time 2 measure as outcome variable). Four items (1–4 as listed in Table 1) were adapted from Link et al.'s Rejection Experiences scale (Link, Struening, Rahav, & Phelan, 1997). An additional item (5) regarding others' lowered expectations toward oneself was added as a developmentally-salient item reported as a theme by adolescent MH consumers in previous qualitative research conducted by the author. A similar scale was validated in previous work, and found to have good construct validity (Moses, 2009). Items were rated Yes/No and summed.

Perceived public stigma

This scale measures the extent to which youth perceive that teens with emotional or behavioral problems are, as a group,

Table 2
Descriptive data and bivariate associations for enacted stigma (T2) and predictors (T1).

Time 1 predictors (range of scores)	*M* (SD) or % (*N*)	Correlation or group mean (SD)[a]		*P* value
Demographic characteristics				
Age (13–18)	15.3 (1.6)	−.16		.16
Gender (female = 1)	65% (52)	2.0	1.4	.08
Race/ethnicity (Caucasian = 1)	78.8% (63)	1.7	1.8	.91
Medical assistance	15% (12)	2.3	1.7	.26
Clinical factors				
YSR Externalizing (6–45)	20.9 (9.4)	.11		.44
YSR Internalizing (3–49)	24.4 (10.3)	.29		.04
Social context				
Quality of family support (1.7–4.8)	3.3 (.71)	−.04		.74
Quality of friendship support (1.5–5)	3.9 (.84)	.02		.85
Number of friends (0–10[b])	6.6 (3.1)	.20		.08
Number of friends w/'mental health issues' (0–8)	2.2 (2.1)	.30		.007
Identify with "popular" peers	47.5% (38)	2.1 (1.7)	1.3 (1.2)	.04
Identify with athletic peers	52.5% (42)	2.1	1.5	.09
Identify with peers who "get into trouble"	57.5% (46)	1.6	1.5	.68
School functioning				
Grades (in last period)	66.3% (53)	.20		.08
Disciplinary problems at school	16.3% (13)	2.3	1.5	.03
Special learning needs	26.3% (21)	1.7	1.8	.88

[a] Student's *t*-tests: the number to the left represents the mean and SD of the characteristic listed; the number to the right represents the group mean for the rest of the participants.

[b] Number of friends limited to 10.

devalued, socially excluded, blamed, and treated unfairly by others. The scale includes 14 items: half are adapted from Link's Perceived Devaluation/Discrimination Scale (Link et al., 1997), and the other 7 items were developed to capture adolescent-relevant stigma contexts (e.g., "Kids my age look down on other kids who are receiving MH treatment"). This scale has previously demonstrated convergent and discriminant validity and internally consistency (Moses, 2009). Items are rated on a 4-point Likert scale, where higher scores indicate more agreement ($\alpha = .86$).

Data analysis

All analyses were conducted using SPSS (v. 20). Bivariate associations were conducted between enacted stigma (Time 2) and each of the predictor variables (at Time 1 and Time 2) using student's *t*-test for continuous variables and chi-square for categorical variables. A multivariate OLS regression analyses with a two-tailed test was used to explore the most robust correlates of adolescents' enacted stigma at 6-months, including variables significant as bivariates at $p < .05$. The multivariate model controlled for two additional factors in two respective regression models. In Model 2, enacted stigma ratings at Time 1 were held constant to identify stigma processes subsequent to psychiatric hospitalization (rather than ongoing or cumulative stigma processes). In Model 3, perceived public stigma was added to examine whether focal relationships remained significant when accounting for general perceptions of public stigma.

Results

Overall, the rates of youths' endorsement of enacted stigma remained remarkably consistent over the six-month period (see Table 1). The most commonly endorsed expression of enacted stigma involved the sense that people looked down on themselves when the MH treatment was disclosed, followed by the experience of being disrespected. Relatively few youth reported outright rejection by friends (item 2: 10% and 12.5% at Time 1 and 2 respectively). Over one-quarter of participants reported experiencing none of the types of enacted stigma surveyed. Among those who reported experiencing stigma, the average participant reported experiencing less than 2 of 5 different expressions of enacted stigma.

The data shown in Tables 2and 3 address the primary research question about the extent to which enacted stigma at Time 2 was predicted by Time 1 variables. As shown in Table 2, there were no significant differences in stigma ratings by socio-demographic characteristics, though gender differences approached significance; girls reported marginally higher stigma ratings than boys at Time 2.

Hypothesis 1, regarding the impact of social affiliation or identification on enacted stigma, was partially supported. As expected, identifying with popular peers was predictive of more reported stigma at follow-up (identifying with athletes was only marginally significant). Contrary to expectation, however, identifying or affiliating with alternative status peers who were presumably more marginalized was either uncorrelated with enacted stigma (peers who get into trouble), or positively associated, meaning that more friends known to have their own MH problems at Time 1 related to *higher* rates of stigma at Time 2.

Hypothesis 2, regarding the effect of social support and size of social network as factors that would attenuate enacted stigma, was not supported by the data. Contrary to expectations, all measures of social support were either unrelated to stigma or correlated with *more* rather than less enacted stigma (number of friends was marginally significantly associated with higher stigma ratings).

Hypotheses 3 and 4 were both partially supported. In terms of clinical symptoms, as anticipated, higher internalizing YSR symptom ratings were associated with more enacted stigma, however externalizing YSR symptom ratings were not. In terms of school functioning, as expected, youth reporting disciplinary problems at school reported higher social stigma at follow-up. On the other hand, better academic functioning, expected to protect against social stigma, was associated with *more* enacted stigma reported at follow-up—but this was only marginally significant. Also, contrary to our hypothesis, special learning needs status was not predictive of stigma ratings.

OLS regression analysis was used to identify which of the factors held up in multivariate analysis. Analysis of multicollinearity indicated no problematic inter-correlations: the variance inflation factor ranged between 1.0 and 1.6 and tolerance was >.85 for all predictors in the models. In the first model, when four predictors were entered as one model, as shown in Table 3, all factors retained significance as unique predictors. In Model 2, enacted stigma measured at Time 1 was added as a control to identify the significance of predictors in the post-hospitalization period (enacted stigma ratings at Time 1 and Time 2 were moderately correlated: $r = .44$, $p < .001$). In this model, three factors remained significant predictors of enacted stigma at follow-up: number of friends with psychological problems, affiliation with popular peers, and school disciplinary problems; the model explained 36% of the variance. These same three factors remained significant in Model 3, which controlled for the level of perceived public stigma measured at Time 2 to partial out the influence of general perceptions of stigma directed toward adolescents with mental illness on enacted stigma (the correlation between enacted stigma and perceived public stigma at Time 2 was $r = .41$, $p < .001$). Perceived public stigma was found to serve as a partial suppressor variable (i.e. increased the significant effect) for disciplinary problems as well as affiliation with friends with MH problems as a predictor of enacted stigma. This third model explained 43% of the variance of enacted stigma.

Table 3
Enacted stigma (Time 2) regressed on clinical and social factors (Time 1) and controlling for enacted stigma at Time 1 (Model 2) and perceived public stigma at Time 2 (Model 3).

	Model1		Model2		Model3	
	B		*B*		*B*	
YSR Internalizing	.34**	$F_{(4,\ 65)} = 7.5$, $p = .001$, adj $R^2 = .34$	.26*	$F_{(5,\ 64)} = 6.7$, $p < .001$, adj $R^2 = .36$	.28*	$F_{(5,\ 64)} = 8.5$, $p < .001$, adj $R^2 = .43$
(# of) Friends perceived to have MH problems	.34**		.31**		.34**	
Identify with "popular" peer group	.32**		.30*		.27*	
Disciplinary problems (1 = Yes)	.26*		.22†		.24*	
Enacted Stigma Time 1	–		.23†		–	
Perceived Public Stigma (Time 2)			–		.31**	

†$p < .10$, *$p < .05$, **$p < .01$.

Discussion

Six months following their discharge from psychiatric hospitalization, 70% of adolescents reported experiencing one or more aspects of enacted mental illness stigma. Most of the stigma reported was not outright social rejection, but rather general devaluation, disrespect, emotional insult, and being under-estimated by others. Some have noted the tendency of stigmatized individuals to be more likely to report a general sense of stigma while having greater difficulty identifying specific incidents or perpetrators of stigmatizing behavior (e.g., Heslin, Singzon, Aimiuwu, Sheridan, & Hamilton, 2012; Wahl & Harman, 1989). At any rate, these results reflect the commonality of perceptions of negative reactions toward oneself among adolescent MH consumers.

Study hypotheses regarding the effects of social context as well as clinical symptoms and school functioning were partially confirmed. We found that youths' social affiliation and identification as well as disciplinary problems at school were the most robust predictors of enacted stigma at six months' follow-up. As expected, identification with higher social status peers ('populars') predicted higher stigma ratings (identifications with athletic peers or peers who 'get into trouble' were not significant). One explanation is that a 'deviant' event such as psychiatric hospitalization is too incongruous with the standards and aspirations of this group, leading to social rejection. Behavior perceived as too different relative to the larger peer group ("behavior atypicality") is predictive of peer rejection and victimization (DeRosier & Mercer, 2009).

In regards to identification and affiliation with "alternative status" peers, the results contradicted our hypothesis that identification with these peers would predict lower rates of enacted stigma. In fact, the data indicated a non-significant association with peers who get into trouble, and *higher* stigma among those who affiliated with more friends who had MH problems of their own. Stigma in the latter case may be imposed from non-friend peers who see the person as not only carrying the stigma of MH problems, but also the stigma of associating with others who have such problems. The stigma may also come from friends, who themselves have MH problems, as a way of coping with stereotype threat and attempting to enhance their own social status among popular peers (Schmader & Lickel, 2006; Shapiro, 2011). Trouble-making (delinquency or rule-breaking behavior) may be less stigmatizing than mental illness for some youth (Hirschfield, 2008).

Generally, our data indicate that youths' social identifications and affiliations may be more relevant for their experiences of mental illness stigma than other social characteristics. Neither social network structure (size) nor social network function (quality of social support from friends and family)—both expected to represent social capital that can protect against social stigma—were significantly associated with enacted stigma. The number of friends reported at Time 1 was a marginally significant correlate of social stigma but, contrary to expectation, more friends predicted *more* rather than less enacted stigma. Perhaps in a context of a larger network, there are more opportunities for some friends to be critical or rejecting (Buunk & Hoorens, 1992; Hughes, 2005). Notably, youth with a mental illness do not typically report having fewer social relationships than peers, but their friendships tend to be more restricted, as their social networks are less intimate, cohesive and stable (McLeod & Uemura, 2012). As for the statistically non-significant finding with respect to quality of social support, it is conceivable that participants' rated their stigma experiences in relation to one set of people (individuals other than friends and family such as previous friends, teachers, or acquaintances), while ratings of social support referenced a different set of individuals (current friends, close family). In other words, the independence of these factors may be an artifact of measurement. Still, this is a surprising finding, as we know that mental illness stigma also occurs in friendship and family relationships (Chandra & Minkovitz, 2007; Elkington et al., 2012; Lindsey et al., 2010; Moses, 2010b). There is a great need for additional research on how stigma and social support manifest and interact in the lives of individuals suffering from mental illness.

We also anticipated that higher clinical symptom ratings and school-related academic and behavioral difficulties would relate to more enacted stigma, but these hypotheses were also only partially confirmed. Higher internalizing symptom ratings and recent disciplinary problems at school were both independent predictors of enacted stigma. Both factors would likely draw additional negative attention to the youth in ways that lead to more negative social judgment or avoidance. More depressive symptoms predict passive or withdrawn behavior and consequent neglect by peers (Agoston & Rudolph, 2013). Otherwise, the negative cognitive biases inherent in internalizing symptoms can also relate to a greater inclination to *perceive* enacted stigma (Rusch, Angermeyer, & Corrigan, 2005). In this study, we cannot determine if internalizing symptoms lead to actual stigmatizing reactions from others or perceptions thereof.

The association between troubling behavior (externalizing symptoms and school disciplinary problems) and stigma was expected given that individuals who 'act badly' or are socially disruptive experience more social devaluation and exclusion (Brendgen, Vitaro, Turgeon, & Poulin, 2002; Flory et al., 2011; Huphrey et al., 2007; Normand, Schneider, & Robaey, 2007). In fact, our findings were mixed; the subset of youth reporting discipline problems at school did report more stigma, however, higher externalizing symptom ratings were not associated with more enacted stigma, while. the latter finding may reflect a tendency for misperception of social status and peer reactions on the part of youth with more externalizing behavior symptoms (Brendgen et al., 2002). The lack of association between being identified with special learning needs and enacted stigma is also noteworthy. One possible explanation is that a learning disability is a relatively concealable stigma (Hamovitch, 2007); this may afford less risk of overt stigmatization.

When considering and interpreting these findings, it is important to bear in mind the limitations of this study. Though there is a 6-month time lag between the initial and follow-up interviews, this research is limited by the short duration of follow-up, and the potential influence of third factors unaccounted for. In addition, the sample size is small relative to the number of variables included and the number of analyses. The source of the sample (patients of one hospital in one mid-sized community), its demographics (largely white and middle class), and the high representation of mood disorders in the sample, limit the generalizability of findings. Self-selection into the study may have biased the sample in favor of higher social and family functioning or lower levels of functional impairment due to mental illness. The sole reliance on adolescent self report for many of the measures (e.g., family functioning, school problems) certainly entails the potential for inaccuracy. Though, in practical terms, the *perception* of stigma and interpersonal rejection may be more important than any 'objective' measure for stigma, it would be useful to triangulate the measurement of stigma with additional measures such as social network analysis measures including bilateral social nominations to 'place' youth into social groups with which they are identified, or to verify the personal characteristics of friends or friend groups (e.g., MH problems or drug use).

Despite these limitations, our results suggest that youth treated for psychiatric disorders who have what we typically consider to be assets such as popularity and a larger social network, as well as youth with more presumed liabilities, for example more friends who also have MH challenges and school disciplinary problems, may be at higher risk for experiencing mental illness stigma. Anti-bias and anti-bullying programs in schools need to address the problem of social discrimination directed at those with mental health problems as well as other stigmatized attributes. To develop more sensitive assessment tools and productive prevention and intervention efforts, additional research is necessary to further deepen our understanding of the individual-level and setting-level attributes that protect against or increase the risk for mental illness stigmatization.

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