Gender specificity of self- stigma, public stigma, and help-seeking sources of mental disorders in youths

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Abstract

Self-stigma and public stigma are major barriers to seeking help for mental health problems and they are sensitive to gender. This study investigated self-stigma and public stigma toward peers with mental disorders in a youth sample and evaluated gender differences in stigma scores. The sample consists of 1,113 youths ($M = 16.96$ years, $SD = 1.88$, 56% female) that were randomly assigned to a self-evaluation or a peer-evaluation condition using a vignette describing symptoms fulfilling *DSM-5* diagnostic criteria of one of five mental disorders (depressive disorder, social anxiety disorder, ADHD, substance abuse, and bulimia). Stigma was assessed using a questionnaire assessing eight emotional reactions and attitudes toward the protagonist in the vignette. Stigma scores were significantly higher in the self-evaluation condition (self-stigma) compared to the peer-evaluation condition (public stigma) in terms of a higher minimization of symptoms, higher blame for mental disorders, less pity and (self) compassion. Results indicated that prior or current experience of psychotherapy and familiarity with people seeking psychotherapy were predictors for less blame for mental disorders for the peer-evaluation but not for the self-evaluation. Gender-differences were found for public stigma, not for self-stigma. Interventions that aim to increase help-seeking intentions in youths might focus more on the reduction of self-stigma in addition to public stigma. Gender-sensitive approaches should be developed to achieve a decrease in self-stigma and public stigma especially in male youths.

Keywords: self-stigma, public stigma, adolescents, youths, mental disorder, psychotherapy, help-seeking

Introduction

Mental disorders first manifest mainly in childhood and adolescence (Kessler et al., 2005; Kim-Cohen et al., 2003) with prevalence rates of approximately 17%–50% (Gore et al., 2011; Merikangas et al., 2010). However, the number of youths with mental health problems seeking professional help is only about 21%–40% (Hintzpeter et al., 2014; Lu, 2020).

One major barrier to seeking professional help for mental health problems in youths is the stigmatizing attitudes toward their peers with mental disorders (Aguirre Velasco et al., 2020; Gulliver et al., 2010; Moses, 2009). Stigma can be differentiated as public stigma, perceived public stigma, and self-stigma. Public stigma is the reaction that the general population has to people with mental disorders. Perceived public stigma refers to the awareness of public stigma, and self-stigma is the prejudice that individuals turn against themselves (Corrigan & Watson, 2002; Link, 1987). Public stigma and self-stigma can be divided in stereotypes, prejudices, and discrimination (Corrigan & Watson, 2002). Stereotypes are negative beliefs about a group or in the context of self-stigma against the self. Prejudices is the agreement with the belief and/or a negative emotional reaction, and discrimination is the response to the prejudice. The awareness of public stigma (perceived public stigma) seems to be the first stage in the development of self-stigma followed by the agreement and application of those stereotypes resulting in self-stigma (Corrigan & Rao, 2012; Vogel et al., 2013). Emotional reactions are also an important component in conceptualizing stigma (Link et al., 2004), as people who agree with negative stereotypes develop negative emotional reactions, which are also internalized when it comes to self-stigma (Corrigan & Rao, 2012). In their review of emotional reactions to people with mental disorders, Angermeyer et al. (2010) indicated that in assessments of stigma toward people with mental disorders, emotional reactions have been under researched, despite their importance in conceptualizing stigma.

There is evidence that people often report prosocial reactions such as compassion for people with depression but show uneasiness, anger, and fear regarding people with

schizophrenia in adult samples (Angermeyer & Dietrich, 2006; Reavley & Jorm, 2011). Addressing self-stigma is important when attempting to increase help-seeking behavior in people with mental health problems. In adult samples, higher self-stigma is associated with the severity of mental disorders, reduced treatment adherence (Corrigan et al., 2006, 2009; Livingston & Boyd, 2010), a negative attitude toward help seeking (Jennings et al., 2015; Vogel et al., 2006), less perceived need for help for their mental health problems (Wu et al., 2017), and less intention to seek mental health information (Lannin et al., 2016). Regarding barriers to help-seeking in adult samples, there is evidence that self-stigma is more relevant to help-seeking attitudes than public stigma (Nam et al., 2013; Topkaya, 2014; Vogel et al., 2006). However, interventions for youth aiming to increase help-seeking for mental health problems often address the reduction of public stigma, whereas a reduction of self-stigma is often neglected (Aguirre-Velasco et al., 2020). Interventions to decrease self-stigma are highly relevant as they seem to be more resistant to change compared to public stigma. While a prior or current experience of psychotherapy, or familiarity with people having a mental disorder are associated with lower public stigma (Bellanca & Pote, 2013; Caelear et al., 2011; Dey et al., 2020; Griffiths et al., 2008; Jorm & Wright, 2008; Pearl et al., 2016), self-stigma persisted after short-term counseling (Kendra et al., 2014). Studies with youth investigating self-stigma toward help-seeking and mental health problems are scarce (Aguirre-Valesco et al., 2020; Kaushik et al., 2016). In a sample of adolescents seeking mental health care, 20% reported self-stigma concerns (Moses, 2010). This had a negative influence on coping with a mental disorder after being discharged from an inpatient setting (Moses, 2010), and higher self-stigma was also associated with more severe symptoms of depression (Moses, 2009).

The Role of Gender and Stigma

Gender plays an important role in (self)-stigmatizing attitudes toward people with mental disorders and help-seeking. In adult samples, there is evidence of higher stigmatizing attitudes and self-stigma toward depression in men than in women (Dietrich et al., 2014;

Griffiths et al., 2008; Latalova et al., 2014; Wang et al., 2007) as well as fewer help-seeking intentions for mental health problems (Addis & Mahalik, 2003; Oliver et al., 2005). Men are also more likely than women to have negative opinions of panic attacks and eating disorders, whereas no gender differences were found for substance disorders (Crisp et al., 2005; McLean et al., 2016). In youths, research on gender differences in attitudes toward people with mental disorders is limited. In young people, female gender was associated with lower stigma toward a peer with depression, alcohol misuse, social phobia, PTSD, and psychosis (Dey et al., 2020; Jorm & Wright, 2008; Yap et al., 2014). Boys reported higher mental health stigma and less willingness to use mental health services (Chandra & Minkovitz, 2006; Gonzalez et al., 2005) and less help of a general practitioner compared to girls (Jorm, Wright & Morgan, 2007). Boys and girls also differ in their choice of help sources. Boys show a higher preference for informal help sources and are more often encouraged by a family member to seek formal help than girls (Rickwood et al., 2005). When seeking informal help, girls turn more often to a friend, whereas boys more often prefer a family member (Chandra & Minkovitz, 2006). Boys with mental disorders believed they were perceived as violent when disclosing their mental disorders, whereas girls reported being perceived as fragile or incapable (Elkington et al., 2012).

The Present Study

There is evidence that self-stigma has a higher impact on attitudes toward help-seeking than public stigma (Nam et al., 2013; Topkaya, 2014). As research of self-stigma in youth samples is limited (Aguirre-Velasco et al., 2020), the evaluation of stigma specificities might help to improve interventions aiming to lower self-stigma and public stigma toward mental disorders and help-seeking. Symptoms of a mental disorder have a decisive influence on actual behavioral intention (Rickwood et al., 2005) and attitudes of help-seeking might change, when people are confronted with symptoms of a mental disorder compared to anticipated attitudes of help-seeking when feeling healthy. Therefore, our first aim was to

evaluate if stigma and the perceived need for help differ when youths are either confronted with symptoms of a mental disorder themselves (self-stigma) compared to an evaluation of a peer with a mental disorder (public stigma). We hypothesized higher stigmatizing attitudes and less perceived need for help in a self-evaluation condition compared to a peer-evaluation condition (Nam et al., 2013; Topkaya, 2014; Vogel et al., 2006). The assessment of emotions was also included as they are an important component in conceptualizing stigma (Link et al., 2004). We further assessed, if participants identify the symptoms in the vignette as a mental disorder, as the recognition of symptoms increases the likelihood to seek professional help (Rickwood et al., 2007). The second aim was to evaluate the influence of a prior or current experience of a psychotherapy or familiarity with someone having a prior or current experience of psychotherapy, as such experiences are associated with lower public stigma and persisting self-stigma (Bellanca & Pote, 2013; Caelear et al., 2011; Dey et al., 2020; Griffiths et al., 2008; Kendra et al., 2014). We hypothesized that familiarity and a prior or current experience with psychotherapy is a predictor for less stigmatizing attitudes in the peer evaluation whereas we will not find an impact in the self-evaluation condition. As gender plays an important role in (self)-stigmatizing attitudes toward people with mental disorders and help-seeking (Dey et al., 2020; Jorm & Wright, 2008; Yap et al., 2014), the third aim was to evaluate gender differences. We expected higher self-stigma, a lower perceived need for help and a higher recommendation of informal help sources in male participants compared to female participants (Chandra & Minkovitz, 2006; Jorm & Wright, 2008; Yap et al., 2014). We used a randomly controlled experimental design with vignettes consisting of descriptions of five mental disorders (depressive disorder, social anxiety disorder, ADHD, substance abuse disorder, bulimia nervosa) fulfilling *DSM-5* diagnostic criteria. These mental disorders were chosen because of their high prevalence rates in youths (Gore et al., 2011; Merikangas et al., 2010). For self-stigma, participants were instructed to imagine that they were the person in the vignette and they have been asked about attitudes and emotional reactions toward themselves

(self-evaluation). For the public stigma condition, they were instructed to indicate their attitudes (minimization of symptoms and blame for mental disorders) and emotional reactions toward the adolescent described in the vignette (peer-evaluation). We assessed identification with the protagonist in the vignette as a control variable and hypothesized a higher identification in the self-evaluation compared to the peer-evaluation.

Method

Participants

A total of 1,113 youths participated in this study ($M_{\text{age}} = 17.0$ years, $SD = 1.9$, range = 12–21 years) after exclusion of 102 participants who did not correctly answer the two control items to ensure that they had read the vignette. Forty-three percent identified themselves as female and 56% as male. Sixty-nine percent attended a high school, 21% a university, and 10% a vocational program.

Nineteen percent ($n = 211$) reported prior experience of psychotherapy, which 64.85% perceived as helpful, and 67% were familiar with someone who had had psychotherapy. These contacts were parents or siblings (20%), other relatives (14%), boyfriend/girlfriend (5%), friends (38%), and other persons (17%).

Procedure

The local ethics committee approved this study. We used a paper-and-pencil assessment (85%) and an online assessment (15%). Participants were recruited in local schools using flyers and via social media. Parents and youths were informed about the study, and written consent in accordance with the Declaration of Helsinki from parents and youths was mandatory for youths under the age of 18 years. Participants between 12 and 21 years of age were included. For the assessment in schools, participants received an introduction of the researcher and completed the paper-and-pencil questionnaire in class. We paid attention to create a calm working atmosphere and sufficient privacy. They did not receive compensation. For the online assessment, participants received a link to the study. We designed three

versions of a vignette for five different mental disorders (3x5) with 1) a version for self-stigma, 2) a peer-evaluation with a male protagonist, and 3) a peer evaluation with a female protagonist. The different versions of the vignettes were distributed randomly and blindly to the participants in blank envelopes. Each participant rated one vignette-version for one mental disorder. For the online version, we used a filter that randomly distributed a version of the vignette to the participant. The version for self-stigma was presented to 32% ($n = 356$) of the participants, the peer-evaluation version with a male protagonist to 36% ($n = 401$), and the peer-evaluation version with a female protagonist to 32% ($n = 356$). Among the three versions, we did not find significant differences regarding gender, $\chi^2 (4, N = 1,113) = 4.25, p = .3$, age, $F(1, 1,090) = 0.60, p = .44$, education, $\chi^2 (12, N = 1,112) = 8.99, p = .70$, prior or current experience of psychotherapy, $\chi^2 (2, N = 1,083) = 0.78, p = .68$, or familiarity with psychotherapy, $\chi^2 (2, N = 1,086) = 2.60, p = .27$.

Vignettes

The vignettes described symptoms of a mental disorder, specifically, the criteria of a depressive disorder, social anxiety disorder, ADHD, substance abuse disorder, or bulimia nervosa according to the *DSM-5*. We conducted a pretest, asking six licensed psychotherapists to name the mental disorder described in the vignettes. Interrater reliability was perfect with Fleiss's kappa = 1.00 for all vignettes. The first version of the vignette was designed to assess self-stigma. Participants were told to take the perspective of the protagonist before reading the vignette: *“Attention! Put yourself in the role of the protagonist as much as possible and answer all the questions for the rest of the questionnaire from this position. At this point, you should imagine that you are this person.”* The vignette was written in present tense first-person singular. Participants were reminded of the instructions twice while completing the questionnaire. The second and third vignettes were designed to assess public stigma. Participants were told to answer the questions in regard to the male or female protagonist who appeared in the vignette they received. These vignettes were written in present tense third-

person singular and differed only in the gender of the protagonist (male and female versions). The names Alexander and Jana were chosen as they were considered neutral with regard to age, intelligence, religion, and attractiveness (Rudolph et al., 2007). The distribution of mental disorders in the self-evaluation and the peer-evaluation condition was comparable, $\chi^2(4, N = 1,086) = 3.40, p = .49$. Differences were found when differentiating between participant's gender and target's gender, $\chi^2(12, N = 732) = 64.32, p < .001$, with a higher number of vignettes describing ADHD in male participants evaluating a male target compared to female participants evaluating a female target ($p < .001$). For both target's, male participants also received a higher number of vignettes with substance abuse and bulimia compared to female participants ($p < .001$). Means and standard-deviations for each mental disorder are reported in Table S1 (self-evaluation) and Table S2 (peer-evaluation).

Measures

Sociodemographics

We assessed prior or current experience of psychotherapy (yes or no) and if it was perceived as helpful (yes or no), as well as familiarity with someone having a prior or current experience of psychotherapy (parent, sibling, friend, boyfriend/girlfriend, other) and if the person reported the psychotherapy as helpful (yes or no).

Manipulation Check

To ensure that participants read the vignette, they had to answer two questions on the content of the vignette. We also assessed the degree of identification with the protagonist with one item (e.g., “*I could identify with Alexander/Jana*”) using a 6-point Likert scale (1 = *totally disagree*; 6 = *totally agree*).

Stigma

Emotional Reaction

We assessed eight emotions associated with a reaction toward peers with the mental disorders described in the vignette (Angermeyer et al., 2010). Participants indicated if a

protagonist provoked one of the following emotions: fear, insecurity, anger, pity/self-pity, unease, compassion/self-compassion, sympathy, or annoyance. Each item was rated on a 6-point Likert scale (1 = *totally disagree*; 6 = *totally agree*). For self-stigma, participants were asked to indicate their emotions when imagining they were the person in the vignette.

Attitudes

Stigma items suitable for the vignette design were extracted from a questionnaire assessing barriers accessing psychotherapy in youths (Pfeiffer & In-Albon, 2021). We chose items related to help-seeking barriers specifically in youths. The items were adapted to the protagonist in the vignette using the correspondent pronouns (First person singular for the self-evaluation and third person singular for the peer-evaluation). Except for the pronouns, the items were all identical with regard to the content. In the self-evaluation condition, participants were asked to rate their own attitudes “as the person in the vignette” (e.g. “*I think that I should be ashamed of my problems*”); for the peer-evaluation of Alexander and Jana, items referred explicitly to them (e.g., “*I think that Alexander’s symptoms are a sign of personal weakness*”; “*I think that Jana should be ashamed of her problems*”). Items were rated on a 6-point Likert scale (1 = *totally disagree*; 6 = *totally agree*) with eight negative and three positive items. We conducted an exploratory factor analysis. The results of Bartlett’s test of sphericity indicated that the correlation matrix was not random, $\chi^2(55) = 1282,55$, $p < .001$, and the KMO statistic was .71, well above the minimum standard for conducting factor analysis. Parallel analysis and the scree-plot suggested a four-factor solution, which was examined for adequacy revealing a good fit with Tucker-Lewis-Index = .91, RMSR= .02, RMSEA = .04. The four factors were identified as 1) minimization of symptoms (4 items; Cronbach’s alpha = .70), 2) blaming (2 items; Cronbach’s alpha = .70), 3) perceived public stigma (2 items; Cronbach’s alpha = .50), and 4) fear of work-related discrimination with a single item. Two items did not load on any of the factors and were excluded for further

analysis as well as the single item and the items for the perceived public stigma due to insufficient internal reliability.

Perceived Need for Help, Help Sources, and Identification of a Mental Disorder

We asked participants if they thought that the person in the vignette needed help with a dichotomous response format (yes or no) and what kind of help source the protagonist should seek. Multiple entries were possible. To assess help sources, we used an adaption of the General Help-Seeking Questionnaire (Wilson, Deane, Ciarrochi, & Rickwood, 2005) with a dichotomous response format (yes or no) for the suitability of help from (a) formal help sources (psychotherapist, psychiatrist, pediatrician), (b) informal help sources (parents, other family member, friend, boyfriend/girlfriend, teacher), and (c) a crisis hotline. We also assessed if they thought the symptoms described in the vignette fulfilled the criteria of a mental disorder.

Data Processing and Statistical Analysis

Statistical analyses were conducted with R (version 4.03). Means, standard deviations, and relative frequencies for identification with the protagonist, stigma scores, need for help, the identification of a mental disorder, and reported help sources were calculated, with positive items reversed for the stigma scale. We included only those participants who completed the questionnaire and who correctly answered the two control items with regard to the vignette. We excluded participants in the online version who spent less than 20 s on the page to read the vignette. We calculated a two-way multifactorial analysis of variance (MANOVA) with identification with the protagonist in the vignette, emotional reactions, minimization of symptoms, and blame for mental disorders as dependent variables and condition (self-evaluation versus peer-evaluation) and gender (male, female) as between-subjects variables. First, we evaluated if stigma and the perceived need for help differs in youths when comparing a self-evaluation and a peer-evaluation. We evaluated the interaction effect between condition and gender (2 x 2) to determine, if stigma in both conditions differs in

male or female gender. Differences for perceived need for help, and the identification of a mental disorder were calculated using chi-square statistics. To investigate if a prior or current experience of psychotherapy (0 = yes, 1 = no) or familiarity (0 = yes, 1 = no) predicted lower self-stigma or public stigma, we conducted in a second step a linear regression analysis for each condition for minimization of symptoms and blame for mental disorders. In a third step, we evaluated differences within the peer-evaluation for participant's gender and target's gender combination. Therefore we created a dummy variable with participants gender and target's gender (2 x 2) as between subject factor (;male participants reading the male vignette, male participants reading the female vignette, female participants reading the male vignette, female participants reading the female vignette) and conducted a MANOVA with emotional reactions, minimization of symptoms, and blame for mental disorders as dependent variables. We also evaluated gender-differences for help-seeking sources in the self-evaluation and distinguished between formal (psychotherapist, psychiatrist, pediatrician/physician) and informal (parents, friends, other family members, boyfriend/girlfriend, teacher, crisis hotline) help sources. We created a dummy variable for the amount of informal and formal help-seeking (0 = no informal/formal help source is indicated, 1 = at least one informal/formal help source is indicated). All tests were conducted using the Bonferroni–Holm method to correct for multiple comparisons.

Results

Comparison of Self-Evaluation and Peer-Evaluation

We found significant differences for the identification with the protagonist, emotional reactions, minimization of symptoms, and blame for mental disorders between the self-evaluation and peer-evaluation condition, $F(11, 1,046) = 36.08, p < .001$. Descriptive statistics and effect sizes for post hoc tests are presented in Table 1. We did not find an interaction effect between the condition and participant's gender, $F(11, 1,046) = 1.61, p =$

.64. No differences were found for the perceived need for help, $\chi^2 (1, N=1,113) = 18.62, p = .40$, or the identification of a mental disorder, $\chi^2 (1, N=1,113) = 0.00, p = 1.00$.

Familiarity with psychotherapy and prior experience of psychotherapy

In the self-evaluation condition, a prior or current experience of psychotherapy and familiarity with psychotherapy did not predict minimization of symptoms, $R^2 = 0.00, F(2, 356) = 0.61, p = 1.00$, nor blame for mental disorders, $R^2 = 0.00, F(2, 356) = 0.55, p = 1.00$. In the peer-evaluation, we found an impact of blame for mental disorders, $R^2 = 0.02, F(2, 727) = 12.25, p < .01$, with prior or current experience of psychotherapy ($B = 0.27, p = .04$) and familiarity with people seeking psychotherapy ($B = 0.30, p = .04$) being predictors for less blame for mental disorders. We did not find an impact of both predictors for minimization of symptoms, $R^2 = 0.03, F(2, 727) = 6.57, p = .05$.

Comparison between participant's and target's gender combinations within the peer-evaluation

We found significant differences between the four groups (participant's gender x target's gender), $F(10, 702) = 7.71, p < .001$. Descriptive statistics, F statistics, and effect sizes are reported in Table 2. Post-hoc tests revealed that the male protagonist received less unease ($p = .03$) and pity ($p < .001$) by male participants compared to female participants. The female vignette received higher minimization ($p < .001$) as well as less pity ($p < .001$), less insecurity ($p < .001$), and compassion ($p < .001$) by male participants compared to female participants. No differences between groups were found for the recommendation of help, $\chi^2 (1, N = 756) = 9.11, p = 0.53$, or the identification of a mental disorder, $\chi^2 (1, N = 756) = 2.22, p = 1.00$. Regarding gender differences in help sources, we did not find evidence that boys differ in their choice of formal help-sources, $\chi^2 (1, N = 346) = 3.01, p = 1.00$ or informal help sources compared to girls, $\chi^2 (1, N = 346) = 8.05, p = 1.00$. An overview of chosen help sources is given in Table 3.

Discussion

The aim of the study was to investigate the relevance of self-stigma compared to public stigma using a vignette design with consideration of gender differences. As hypothesized, we found evidence of significantly higher self-stigma than public stigma in terms of less pity and compassion as well as higher minimization of symptoms and blame for mental disorders. These results are similar to findings in adult samples (Nam et al., 2013; Topkaya, 2014; Vogel et al., 2006), which emphasizes the high relevance of focusing on the reduction of self-stigma in youths in addition to public stigma in order to lower barriers to help seeking for mental health problems. Interventions aiming to increase help-seeking behavior by reducing public stigma might not be enough to motivate youths for treatment in case they develop actual mental health problems. The enhancement of skills to cope with self-stigma through improvements in self-esteem, self-compassion, and self-empowerment and also using cognitive restructuring for stigmatizing beliefs of the individual and narrative enhancement in a group-setting are promising approaches in reducing self-stigma (Hansson et al., 2017; Heath et al., 2018; Mittal et al., 2012). Contrary to our hypothesis, we did not find less perceived need for help in the self-evaluation condition. Further research is necessary to determine the underlying factors with regard to specific interventions to reduce self-stigma. In line with previous studies, we found less blame for mental disorders in the peer-evaluation in people with a prior or current experience of psychotherapy and familiarity with people having a prior or current experience of psychotherapy compared to youths without this experience (Calear et al., 2011; Griffiths et al., 2008; Pearl et al., 2016) and no differences for the self-evaluation condition, comparable with Kendra et al. (2014). These results support the evidence for interventions that include contact with people with mental disorders to reduce public stigma (Aguirre Velasco et al., 2020). However, familiarity itself is not sufficient to reduce self-stigma and therefore more specific interventions targeting self-stigma are needed. Regarding self-stigma, our results also suggest a need to include interventions to reduce self-stigma in the treatment of mental disorders, as it is associated with negative

outcomes in the long term (Jennings et al., 2015; Vogel et al., 2006; Wu et al., 2017). Nearly half of the participants did not identify the symptoms in the vignette as a mental disorder. To ensure a certain ambiguity in the vignette, symptoms or consequences were not very severe (e.g., no suicide attempts or school absenteeism). The nonidentification is consistent with findings on mental health literacy as a barrier to help seeking for mental health problems (Aguirre-Velasco et al., 2020), as a lack of mental health literacy impedes the identification of symptoms of a mental disorder as clinically relevant and requiring treatment. Further assessments of the reasons for nonidentification are necessary to draw conclusions for the improvement of interventions to reduce barriers to seeking help for mental health problems in youths.

Gender Differences

In contrast to research in adult samples (Dietrich et al., 2014; Griffiths et al., 2008; Latalova et al., 2014; Wang et al., 2007) and contrary to our hypotheses, we did not find higher self-stigma in male participants, independent of the protagonist's gender. This means we could not confirm a generalized higher self-stigma in male youths. Regarding help sources, we expected higher preference for informal sources in male participants compared to female participants, which was not the case in our sample. This contrasts with the findings of Chandra and Minkovitz (2016), who found a higher preference for informal help sources in boys, but these inconsistent results might be due to different age ranges in the samples, with ours being broader. Overall, the rates of recommended help seeking were high in the self-evaluation condition (86%) as well as in the peer-evaluation conditions (94%), which might indicate not low intentions for help-seeking in general but rather a higher reluctance to seek formal help, which is in line with the results of Rickwood et al. (2005). Evaluating attitudes toward a peer with a mental disorder (peer-evaluation), the male protagonist received less unease and pity by male participants compared to female participants. The female vignette received higher minimization and blame for mental disorders as well as less pity and

compassion by male participants compared to female participants. Those results are consistent with findings of a higher public stigma in male participants (Chandra & Minkovitz, 2006; Gonzalez et al., 2005). However female protagonists also received less insecurity by male participants compared to female participants. Further research should investigate whether gender-role conflicts are activated, in this case whether symptoms of a mental disorder in male protagonists are minimized by females and if male participants demonstrate higher annoyance toward themselves than female participants, because they are not consistent with gender expectations (O'Neil, 2008).

Limitations

This study has some limitations that have to be acknowledged when interpreting the results. There is the question of ecological validity of self-stigmatizing attitudes toward oneself imagining having a mental disorder and attitudes toward an adolescent with a mental disorder based on written vignettes compared with real-life settings. A case vignette does not allow a participant to gather and use further information (e.g., nonverbal language). Self-stigma might also be different when someone is affected by a mental disorder in real life. Participants in the self-evaluation condition did not report a higher identification with the protagonist compared to the peer -evaluation. However, it has to be acknowledged that the vignette design was sufficient to demonstrate differences in self-stigma and public stigma. Due to the randomization algorithm, one limitation for the peer-evaluation is the non-equivalent distribution of vignettes. Participants who finished the study before the last page did not count for the algorithm that lead to a higher assignment of some vignettes compared to others. In consequence, there were more ADHD vignettes in male participants evaluating a male target compared to female participants evaluating a female target. For both target's, male participants also received a higher number of vignettes with substance abuse and bulimia compared to female participants. There is for example evidence that compared to boys, girls indicate higher acceptance of ADHD and depression for male and female

individuals in case vignettes (Swords et al., 2011). There is also evidence that adolescents tend to indicate higher stigmatizing attitudes toward ADHD compared to depression independent of their gender (Bellanca & Pote, 2013), which might also have an impact on the results. Avoiding type 1 error inflation for multiple testing and because of a lack of theoretical background, we did not analyze differences of stigmatizing attitudes between mental disorders. We also chose a between- subject design comparing the self-evaluation design with a peer-evaluation design, subsequent studies might adopt a within-subject design evaluating both experimental conditions within participants in a randomized order. Participants' responses regarding self-stigma and public stigma may also have been affected by social desirability bias, which should be considered in future research studies by including implicit or behavioral measures of stigma, which are less open to the influences of social norms and expectations. Another limitation is the use of a non-validated measure. As we adapted a cross-sectional design, we could not evaluate a causal association between self-stigma and public stigma and actual help-seeking. Longitudinal studies would need to be conducted to identify and understand temporal relationships and actual help-seeking in the case of mental health problems.

Conclusion

Our results indicate that self-stigma for mental disorders might play a more relevant role than public stigma with regard to barriers to help-seeking for mental health problems in youth. A prior or current experience of psychotherapy and familiarity predicted lower stigma scores and seem to have an impact on public stigma, but self-stigma scores did not differ among conditions and seemed to persist. This might be an indication that interventions that aim to increase help-seeking intentions should focus on the decrease of self-stigma in addition to public stigma, for example by the enhancement of self-compassion, cognitive restructuring, and narrative enhancement. Findings of gender differences in public stigma suggest the need for gender-specific interventions to lower stigmatizing attitudes and increase help-seeking for

mental disorders. Further research is necessary to examine the underlying and causal factors of self-stigma.

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Table 1

Means and standard deviations of identification with the protagonist (wP) and stigma as well as pairwise comparisons between self- and peer-evaluation conditions with Bonferroni-adjusted p-values and Cohen's d Effect Sizes

Variable	Self-evaluation (n = 356)	Peer evaluation (n = 757)	F(1, 1113)	p	d
Identification wP	4.2 (1.0)	3.9 (1.1)	22.94	0.13	0.28
Emotion					
Fear	2.0 (1.3)	1.8 (1.1)	3.63	1.00	0.15
Unease	3.0 (1.5)	2.7 (1.4)	8.73	0.12	0.22
Anger	2.5 (1.5)	2.3 (1.4)	5.89	0.41	0.16
Pity	3.1 (1.6)	4.0 (1.5)	99.99	<.001	0.60
Insecurity	2.7 (1.6)	2.6 (1.5)	0.87	1.00	0.06
Compassion	3.6 (1.6)	4.1 (1.5)	37.39	<0.01	0.36
Sympathy	3.0 (1.5)	3.1 (1.5)	0.44	1.00	0.03
Annoyance	2.5 (1.6)	2.3 (1.5)	2.74	1.00	0.11
Attitudes					
Minimization	3.2 (0.9)	2.6 (1.0)	132.96	<.001	0.71
Blame	4.0 (1.1)	2.9 (1.2)	212.75	<.001	0.93

Note. Items were assessed with a 6-point Likert scale (1 = *totally disagree*; 6 = *totally agree*).

Table 2

Descriptive statistics, results of pairwise comparisons, and effect sizes for gender- peer-vignette combinations

Variable	Male Participants		Female participants		<i>F</i>	<i>p</i>	<i>d</i>
	Alex (<i>n</i> = 223) <i>M</i> (<i>SD</i>)	Jana (<i>n</i> = 170) <i>M</i> (<i>SD</i>)	Alex (<i>n</i> = 215) <i>M</i> (<i>SD</i>)	Jana (<i>n</i> = 141) <i>M</i> (<i>SD</i>)			
Emotion							
Fear	1.7 (1.2)	1.7 (1.1)	2.0 (1.2)	2.0 (1.1)	6.89	.22	0.24
Unease	2.4 (1.4)	2.7 (1.5)	2.8 (1.3)	2.9 (1.4)	10.99	.03	0.33
Anger	2.2 (1.4)	2.4 (1.4)	2.4 (1.5)	2.0 (1.3)	0.29	1.00	0.28
Pity	3.6 (1.5)	3.9 (1.4)	4.1 (1.4)	4.4 (1.3)	26.56	.01	0.71
Insecurity	2.4 (1.4)	2.4 (1.4)	2.8 (1.5)	2.9 (1.5)	12.92	.01	0.31
Compassion	3.8 (1.5)	4.0 (1.5)	4.5 (1.5)	4.6 (1.3)	40.98	< .001	0.60
Sympathy	3.0 (1.4)	2.9 (1.4)	3.3 (1.5)	3.2 (1.4)	6.17	1.00	0.30
Annoyance	2.5 (1.6)	2.6 (1.5)	2.3 (1.5)	1.9 (1.6)	15.77	1.00	0.45
Attitudes							
Minimization	2.8 (1.0)	2.7 (1.0)	2.5 (0.9)	2.2 (0.8)	27.65	.01	0.60
Blame	3.1 (1.2)	3.2 (1.2)	2.7 (1.2)	2.6 (1.1)	23.51	.05	0.53

Note. Items were assessed with a 6-point Likert scale (1 = *totally disagree*; 6 = *totally agree*). Alex = vignette with a male protagonist;

Jana = vignette with a male protagonist. The *p* values were corrected for multiple comparisons.

Table 3

Frequencies (%) of preferred (self-evaluation) and recommended (peer-evaluation)

Help sources for symptoms of a mental disorder.*

Sources	Self-evaluation condition		Peer-evaluation condition	
	Male	Female	Male	Female
Formal help sources	61	60	71	75
Psychologist/psychotherapist	54	52	64	70
Psychiatrist	23	16	21	18
Pediatrician/physician	15	21	18	12
Informal help sources	83	86	86	94
Parents	62	71	72	79
Other family members	33	30	38	37
Friends	59	68	69	73
Boyfriend/girlfriend	38	37	44	36
Teacher	23	21	32	40
Crisis hotline	10	11	17	18

**multiple entries allowed*