Dispelling the Stigma of Schizophrenia: II. The Impact of Information on Dangerousness

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Abstract

This study addressed a relatively neglected topic in schizophrenia: identifying methods to *reduce* stigma directed toward individuals with this disorder. The study investigated whether presentation of information describing the association between violent behavior and schizophrenia could affect subjects' impressions of the dangerousness of both a target person with schizophrenia and individuals with mental illness in general. Subjects with and without previous contact with individuals with a mental illness were administered one of four "information sheets" with varying information about schizophrenia and its association with violent behavior. Subjects then read a brief vignette of a male or female target individual with schizophrenia. Results showed that subjects who reported previous contact with individuals with a mental illness rated the male target individual and individuals with mental illness in general as less dangerous than did subjects without previous contact. Subjects who received information summarizing the prevalence rates of violent behavior among individuals with schizophrenia and other psychiatric disorders (e.g., substance abuse) rated individuals with a mental illness as less dangerous than did subjects who did not receive this information. Implications of the findings for public education are discussed.

Key words: Stigma, dangerousness, contact.
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It is well documented that individuals with a severe mental illness such as schizophrenia are viewed negatively by the general public (reviewed by Johannsen 1969; Greenley 1984). These negative reactions have implications for the acceptance of schizophrenia patients into the community (Farina et al. 1974), the behavior of others toward individuals with schizophrenia (Farina and Felner 1973), and the behavior and symptoms of individuals with schizophrenia themselves (Link et al. 1989; Strauss et al. 1989). Thus, stigmatization may pose significant barriers to both recovery from schizophrenia and full integration into the community.

To reduce stigmatization toward individuals with schizophrenia, it is important to identify factors that underlie the public's fear of this population. Growing evidence indicates that a critical component of stigma is the perception that individuals with a severe mental illness are extremely dangerous (Steadman 1981; Link et al. 1987). The central role of perceived dangerousness in the stigmatization of schizophrenia patients may also explain why individuals with children are especially cautious in accepting persons with a mental illness into their community (Wolff et al. 1996). Although perceived dangerousness is not the only factor underlying negative attitudes toward persons with severe mental illness, on the basis of the research cited above, as well as information propagated by the media (discussed below), perceived dangerousness is clearly an important factor.

One way to influence stigmatizing attitudes is to address fears regarding severe mental illness and violent behavior. However, numerous studies, using a variety of different designs and measures, have shown that, in general (i.e., without accounting for specific mitigating variables), people with severe mental illness are more likely to be violent than people without a severe mental illness (e.g., Swanson et al. 1990; Cirincione et al. 1992; Grossman et al. 1995; Eronen et al. 1996; Hodgins et al. 1996; reviewed by Steadman 1981; Monahan 1992; Mulvey 1994; Torrey 1994). But does this research in any way confirm public fears? On the basis of various reviews of the literature (Davis 1991; Link et al. 1992; Monahan 1992; Link and Stueve 1994; Marzuk 1996), many researchers argue that it cannot, because the risk associated with severe mental disorder is "modest" relative to

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the risk associated with gender, age, educational level, and previous violence history—risk factors of which the public may be unaware. Moreover, mental disorder is really quite rare, so the modest risk associated with it translates into only a minuscule proportion of the violence that occurs in the United States (see also Swanson and Holzer 1991; Swanson 1993).

In light of these considerations, the public's fear of people with severe mental illness seems out of proportion to reality (i.e., at least based on the role of perceived dangerousness in contributing to these fears). This is not surprising, as much of the public image of severe mental illness comes from the mass media, and their portrayal of severe mental illness emphasizes the dangerousness stereotype (reviewed by Monahan 1992; Torrey 1994; Wahl 1995). But if public perceptions are out of proportion with reality, what kinds of "factual" (i.e., research-based) information might reduce perceptions of dangerousness and challenge media-induced stereotypes?

One way of framing information on dangerousness and schizophrenia may be to place the violent behavior in a context (e.g., in relation to other disorders) or to identify risk factors that increase the likelihood of violent behavior. The former approach is analogous to an "anchoring heuristic" (Tversky and Kahneman 1974) in which the violence rates of other, more "dangerous" clinical groups serve as a reference point for estimating the violent behavior of individuals with schizophrenia. The latter approach may "dehomogenize" perceptions of individuals with schizophrenia by emphasizing that violence is not a core attribute of the disorder; the potential for violence depends on both illness and personal factors.

The first goal of this study was to determine whether information describing the relationship between violence and severe psychiatric disorders could affect subjects' perceptions of dangerousness regarding both an individual with schizophrenia and individuals with severe mental illness in general. Although a number of previous studies have attempted to change attitudes toward individuals with a mental illness (e.g., Cumming and Cumming 1957; Farina et al. 1978; Fisher and Farina 1979; Domino 1983), to our knowledge only two studies directly addressed subjects' fears of violence in mental illness (Wahl and Lefkowits 1989; Thornton and Wahl 1996). Wahl and Lefkowits found that a brief "trailer" (i.e., three sentences) presented before and following a made-for-TV film in which a psychiatric patient on a day pass murders his wife, did not affect subjects' attitudes toward mental illness. However, they noted, it is possible that the highly arousing impact of the film could not be overcome by a brief message. Furthermore, given the media's tendency to exaggerate depictions of violence among individuals with severe mental illness, assessment of the impact of information on violence and mental illness should be presented in a more realistic context, not one in which the person with severe mental illness is depicted primarily in a homicidal light.

In a followup study, Thornton and Wahl (1996) investigated whether "corrective information" on mental illness could offset the stigmatizing effects of a newspaper article that described a murder committed by a person with mental illness. Two types of corrective information were administered. The first addressed, and attempted to correct, misconceptions about mental illness; for example, noting that violent behavior is fairly rare among persons with mental illness. The second type of corrective information underscored the tendency of the media to present a distorted and biased view of persons with mental illness. Results showed that subjects who read either of these forms of corrective information before reading the stigmatizing newspaper article reported less fear and more acceptance of persons with mental illness than did subjects who did not receive the corrective information. Thus, providing corrective information regarding the association between violence and mental illness may have promise in reducing stigma.

Two types of specific information were used in the study. The first information form, which compared the violence rates of schizophrenia with other psychiatric disorders, was based on two general sources: (1) findings indicating that violence rates for individuals with substance abuse disorders are comparable to, and higher than, violence rates for individuals with schizophrenia (Swanson et al. 1990; Teplin et al. 1994; Volavka et al. 1995; Eronen et al. 1996; Hodgins et al. 1996; but see Cirincione et al. 1992); and (2) the "consensus statement" from the National Stigma Clearinghouse, which states that mental disorders account for less violence in American society than do alcohol and drug abuse (John D. and Catherine T. MacArthur Foundation Research Network on Mental Health and Law 1994). Although a number of individuals with schizophrenia meet concurrent criteria for substance abuse (i.e., one-third of individuals in Swanson et al. 1990; approximately 25% cited in a review by Mueser et al. 1995), the majority of these individuals do not currently have substance abuse disorders. Furthermore, when cases without dual diagnoses are considered, the pattern of differences in violence rates between substance abuse and schizophrenia remains stable; that is, although there is still an absolute difference in violence rate, the difference is not as large as when dual diagnoses are considered (Swanson et al. 1990).

The second information form focused on the misconception that individuals with a serious mental illness are always unpredictable and dangerous. To address this issue, the presence of psychotic symptoms in initiating

violent behavior was described in the context of an individual who is medication-compliant and not currently symptomatic, factors that should further allay subjects' concerns regarding violence and mental illness.

These two information forms were compared with a "standard" information form describing the clinical characteristics of schizophrenia and a "no information" condition. It was hypothesized that the two conditions providing specific information on violent behavior would be associated with lower ratings of dangerousness than the other two conditions would.

The second goal of this study was to extend our findings that previous contact with individuals with a mental illness is associated with less negative reactions to a male target individual with schizophrenia (Penn et al. 1994). As the prevalence rates for schizophrenia are comparable for males and females (American Psychiatric Association 1994), it is important to assess whether factors associated with stigma reduction (i.e., previous contact) for males with schizophrenia have similar effects on perceptions of females with schizophrenia. Because of the tendency to underestimate the likelihood of violence in females compared with males (e.g., Lidz et al. 1993) and findings indicating that individuals treat females more favorably than males with the same disorder (reviewed by Farina 1981), it was hypothesized that previous contact would affect perceptions of dangerousness only for the male target individual. Finally, because of the lack of literature on the relationship between previous contact and the presentation of information about violence and mental illness, no hypotheses were formulated regarding interaction of these variables on perceived dangerousness.

Methods

Participants. Some 182 undergraduates from the Illinois Institute of Technology, 128 males and 54 females, participated in the study for course extra credit. Subjects had an average age of 22.2 years (standard deviation [SD] = 5.39) and an average of 14.4 years of education (SD = 1.33). To reduce any confounding influence of language/culture, subjects were excluded if English was not their first language.

Measures

Information sheets. Subjects were given one of four information sheets to read. (See appendix 1.) The first information sheet, entitled "No Information," comprised the single sentence "You will now read a description of a woman (man) who has schizophrenia which is in remission (i.e., she (he) has no symptoms)." This condition provided a baseline of the subjects' responses to the target individual. This sentence also concluded the other three information conditions. Information sheet #2, entitled "General Information," comprised a general description of the symptoms and course of schizophrenia based on the *DSM–IV* (American Psychiatric Association 1994) and a review of the literature. This condition served as a comparison for information sheets #3 and #4, which described specific information on violence and mental illness. Information sheets #3 and #4 both began with the general information comprising information sheet #2. Information sheet #3, entitled "Acute Information," then summarized the association between the presence of psychotic symptoms and violent behavior in psychiatric patients. Information sheet #4, entitled "Comparative Information," compared the prevalence rates of violent behavior across psychiatric disorders based on the Epidemiologic Catchment Area surveys (Swanson et al. 1990). The definition of violent behavior was based on subjects' responses to the Diagnostic Interview Schedule, a structured interview designed to elicit *DSM* diagnoses. As described by Swanson et al. (1990), a respondent was scored as positive for violent behavior if one of five items (indicating violent behavior) was endorsed and the act occurred in the past year. The violence rates from Swanson et al. (1990) are consistent with the rates of violent behavior described in other community surveys (see Monahan 1992; Swanson 1993).

Vignettes. Subjects were given one of two vignettes to read. Each vignette described either a male or female individual with schizophrenia (i.e., "Jim" or "Jane" Johnson). The vignettes were identical except for the changes in the gender of the individual described. See appendix 2 for a sample vignette.

Previous contact. Subjects completed a brief demographic questionnaire that asked if they knew someone with a mental illness (Penn et al. 1994). Subjects circled the disorder that applied from a list of five choices—depression, schizophrenia, bipolar disorder, anxiety/phobia, other/miscellaneous. In data available for 180 subjects, 54 percent of the sample answered "yes" to this question. In this group, the identified disorders were 43 percent for depression, 33.7 percent schizophrenia, 24.7 percent bipolar disorder, 21 percent anxiety/phobia, and 26.9 percent other/miscellaneous. Subjects often identified more than one disorder.

Dependent measures. Two dependent measures were the focus of the current study: perceived dangerousness to individuals with a mental illness in general and perceived dangerousness to the target individual.

The Dangerousness Scale–General comprises eight items that tap individual beliefs about the dangerousness of individuals with a mental illness (Link et al. 1987; Penn et al. 1994). Each item is rated by the subject on a

seven-point Likert scale from strongly agree to strongly disagree with the midpoint being no opinion. The internal consistency (Cronbach's alpha) of the scale was 0.82.

The Dangerousness Scale–Individual comprises four items that assess individual beliefs about the dangerousness of the target individual in the vignette. It was developed by the authors for the current study. Subjects rated the following items on a seven-point Likert scale from strongly agree to strongly disagree with the midpoint being no opinion: Jim(Jane) Johnson is dangerous; Jim(Jane) Johnson is unpredictable; one can't tell what Jim(Jane) Johnson will do from one moment to the next; and it is dangerous to forget for one moment that Jim(Jane) Johnson is dangerous. The internal consistency (Cronbach's alpha) of the scale was 0.77.

The two measures of perceived dangerousness were correlated with one another ($r = 0.689$, $p < 0.05$), which likely indicates that the stereotype of individuals with severe mental illness was also apparent with respect to the person in the vignette.

Procedure. Groups of 10 to 15 subjects were randomly assigned to one of the four information conditions and one of the two target individual conditions. Subjects were administered the information sheet followed by the description of the target individual. Then the subjects were administered the dependent measures and debriefed.

Results

Because this study was concerned with the effects of information on the measures of perceived dangerousness separately and not on determining dependent variable subsets or the relative contribution of the dependent variables to group separation, two three-way analyses of variance (ANOVAs) rather than an omnibus multivariate analysis of variance (MANOVA) (Huberty and Morris 1989) were conducted on the dangerousness dependent variables.

A 4 (information sheet) × 2 (previous contact: Yes–No) × 2 (target gender: female–male) ANOVA conducted on the Dangerousness–General scores revealed significant main effects for information sheet (F (3,164) = 3.20, $p < 0.03$), and previous contact (F (1,164) = 8.83, $p < 0.01$). No other main effects or interactions were significant. These main effects are summarized in tables 1 and 2, respectively (higher scores = ratings of more dangerousness). To strike a balance between committing Type I and Type II errors, both liberal (i.e., least significant difference [LSD]) and conservative (i.e., Tukey honestly significant difference [HSD]) post-hoc analyses were applied to the information sheet main effect. The post-hoc analyses using the LSD procedure revealed that the comparative information condition produced lower ratings of dangerousness than the other three conditions did (table 1). However, when the more conservative Tukey HSD analysis was applied, the comparative information condition significantly differed from only the acute information condition. Finally, as summarized in table 2, previous contact with someone with a mental illness was associated with lower ratings of dangerousness for individuals with a mental illness in general.

A 4 (information sheet) × 2 (previous contact: Yes–No) × 2 (target gender: female–male) ANOVA conducted on the Dangerousness–Individual scores revealed a significant main effect for previous contact (F (1,166) = 5.46, $p < 0.025$), which is qualified by a significant previous contact (target gender interaction (F (1,166) = 7.24, $p < 0.01$). The interaction was accounted for by the finding that previous contact with someone with a mental illness had an effect on subjects' ratings of dangerousness only for the male target individual (F (1,90) = 10.29, $p < 0.01$); subjects who had previous contact with a person with mental illness perceived the male target individual as

Table 1. Dangerousness measures as a function of information condition

Dangerousness measure	Information condition			
	No information	*General*	*Acute*	*Comparative*
Danger-G[1]				
Mean	25.6[a]	25.4[a]	27.4[a]	21.7[b]
SD	11.0	7.9	8.0	6.9
Danger-I				
Mean	12.3	12.7	13.0	10.7
SD	5.3	4.5	4.9	3.6

Note.—Higher numbers reflect ratings of greater dangerousness. SD = standard deviation. Danger-G = Dangerousness Scale–General; Danger-I = Dangerousness Scale–Individual.

[1] Different letters indicate significantly different groups using the least significant difference post-hoc test. Different superscript letters in bold type indicate significantly different groups using the Tukey honestly significant difference post-hoc test.

Table 2. Dangerousness measure as a function of previous contact with a person with mental illness

Dangerousness measure[1]	Previous contact	
	Yes	No
Danger-G		
Mean	23.9	27.2
SD	8.7	8.6
Danger-I		
Mean	11.3	12.9[2]
SD	4.7	4.5

Note.—Higher numbers reflect ratings of greater dangerousness. SD = standard deviation. Danger-G = Dangerousness Scale–General; Danger-I = Dangerousness Scale–Individual.

[1] $p < 0.05$ between Yes and No.

[2] Interpretation of this main effect should be qualified in light of the interaction with target gender.

less dangerous than did individuals who had not had previous contact. No other effects were significant; subjects' ratings of perceived dangerousness for both the male and female target were not significantly different as a function of previous contact.

Because males and females tend not to differ in their attitudes toward individuals with mental illness (reviewed by Farina 1981), we did not include subject gender as a primary variable of interest in this study. However, to examine whether subject gender influenced any of the results, the analyses were repeated with subject gender as a covariate; results were unchanged. Furthermore, subject gender did not significantly interact with the target gender variable in any of the analyses.[1]

Discussion

The results of this study indicate that both subject (i.e., previous contact) and contextual factors (i.e., information) may affect subjects' perceptions of violent behavior of both individuals with schizophrenia and persons with severe mental illness in general. With respect to our first hypothesis—that information specific to dangerousness and mental illness would be associated with less negative ratings than would the other information conditions—two salient findings emerged from the analyses. First, information comparing the prevalence rates of violent behavior across different disorders resulted in lower ratings of perceived dangerousness relative to all other conditions, with this effect being most robust when the two information conditions specific to violent behavior were contrasted. Second, specific information about violence and mental illness significantly affected the perceptions only of persons with a severe mental illness in general, rather than a specific target individual (although the pattern of means for the specific target individual was in the expected direction). However, because these findings were obtained from a relatively homogeneous sample of undergraduates (i.e., limited to undergraduates who spoke English as a first language), one must be cautious in generalizing the conclusions to populations whose characteristics differ.

The findings provide partial support for the hypothesis that presentation of information on the relationship between dangerousness and mental illness can affect subjects' fears about individuals with schizophrenia. The data indicate that placing the violent behavior of individuals with schizophrenia in the context of other psychiatric disorders may have a beneficial effect on perceptions of dangerousness. As mentioned above, the "anchoring heuristic" may have been operating in this condition; subjects could have estimated the target's propensity for violence based on the "anchor" of violence rates for individuals with substance abuse disorders. Alternatively, one could argue that the observed reduction in perceived dangerousness is a result of nothing more than the shifting of negative feelings from persons with severe mental illness to those with substance abuse disorders. This is an empirical question that, unfortunately cannot be answered by the current study, as no conditions were included to assess subjects' reactions to target individuals with substance abuse disorders. Future research needs to tease out which of these alternative hypotheses accounts for the current findings.

Presentation of information on the association between acute psychotic symptoms and violent behavior did not affect subjects' ratings of dangerousness relative to the control conditions (i.e., no information and basic information). Perhaps this information unintentionally tapped into subjects' beliefs regarding the unpredictability of individuals with a severe psychiatric disorder rather than dispelling this notion. It is also possible that the description of psychotic symptoms appeared strange or foreign to the subjects. Perhaps clarifying this type of clinical terminology would make the behavior more understandable to subjects and therefore less fear-arousing. Thus, efforts to reduce perceptions of dangerousness of individuals with severe psychiatric disorders may not benefit from including information that focuses on psychotic symptoms unless an explanation is provided for them.

[1] There was significant Subject Gender × Previous Contact × Information sheet interaction, $F(3,149) = 2.77$, $p < 0.05$. Probing of this interaction revealed that female subjects reporting previous contact with persons with mental illness rated the target person as more dangerous, relative to male subjects, in the acute information condition. However, the small number of female subjects in the experimental cell ($n = 2$) prevents these results from being confidently interpreted.

Specific information on violence and mental illness did not significantly influence subjects' perceptions of the target individual with schizophrenia. This finding indicates that providing subjects with a general frame of reference may not, by itself, be adequate to affect their impressions of newly encountered individuals with a severe psychiatric disorder. Therefore, prototypical knowledge of violence in severe psychiatric disorders (in general) may have to be supplemented by presentation of multiple examples of individuals with a severe psychiatric disorder, with the proportion of nonviolent to violent examples paralleling the proportion found in the population of persons with severe mental illness. This assertion is consistent with the social psychology debate concerning the use of prototypes and exemplars in social categorization (e.g., Smith and Zarate 1990). Alternatively, subjects may have had some difficulty relating to an individual described in a written vignette. Perhaps using a more meaningful target individual (e.g., one presented on videotape) might have increased the likelihood of information effects being manifested because subjects could actually apply the information to someone they have observed rather than simply imagined.

The findings supported our second hypothesis that previous contact with individuals with a mental illness would affect subjects' perceptions of dangerousness only for the male target with schizophrenia. For subjects who did not have previous contact, the male target may have been associated with the higher violence rates for men vis-à-vis women in samples of individuals without a mental illness (Swanson et al. 1990). Thus, the gender and the psychiatric status of the male target may have had an additive effect on their perceptions of dangerousness. The subjects who had previous contact with individuals with mental illness may have focused more on the male target's psychiatric label than on gender, perhaps because of their experience that gender differences in violent behavior are not clear-cut among individuals with a psychiatric disorder (reviewed by Davis 1991; Steadman et al. 1994; Torrey 1994). The interpretation of these results notwithstanding, the findings indicate that previous contact has a positive impact on subjects' impressions of a male with schizophrenia.

The current findings have implications both for community efforts to reduce stigma toward persons with severe psychiatric disorders and for future research. Because we replicated findings indicating that previous contact is associated with less negative impressions of individuals with a mental illness in general (Trute and Loewen 1978; Link and Cullen 1986; Penn et al. 1994; Angermeyer and Matschinger 1997), the next step may be to investigate the type of contact that reduces perceptions of dangerousness. However, stigma reduction associated with personal contact with someone with severe mental illness may not be readily reproduced by more contrived, less personal contacts with persons in the community. If so, then more research is needed to determine the evolution of stigma reduction, over time, among individuals with close friends or relatives with severe mental illness.

The findings suggest that information that addresses the relationship between violent behavior and severe mental illness has promise in reducing perceptions of dangerousness. Future research should develop and refine an optimal message that affects stigma in general, not just perceptions of dangerousness. For example, information on additional risk factors for violent behavior, such as concurrent substance abuse, may be pertinent. Possibly, omitting information concerning the high risk of substance use among persons with severe mental illness artificially reduced perceptions of dangerousness, especially since subjects were also provided with information about dangerousness in persons with primary substance use disorders. We attempted to indirectly address the issue of "dual diagnoses" (including the presence of other psychiatric conditions) in the comparative information sheet by citing prevalence rates that reflect multiple diagnoses (i.e., an individual who met criteria for more than one disorder was counted as a case in all categories) (Swanson et al. 1990). We presented the data in this manner because many disorders, such as depression and anxiety, tend to co-occur quite frequently and are difficult to differentiate from one another (Clark and Watson 1991). However, because subjects were not informed on this issue in the comparative information sheet, it cannot be ascertained whether including explicit information of the comorbid presence of substance use disorders would have influenced their responses. There is evidence, however, that violence rates based on single versus multiple diagnoses do not differentially impact subjects' ratings of perceived dangerousness.

We collected data from 27 additional subjects to determine whether violence rates based on either single or multiple diagnoses would differentially affect subjects' ratings of dangerousness. Violence rates, based on Swanson et al. (1990) Epidemiologic Catchment Area data, did not have a significant effect on dangerousness ratings for either the target individual (F (1,25) = 0.13, NS), or persons with a severe mental illness in general (F (1,25) = 0.08, NS).

If the comorbidity of substance abuse and schizophrenia is directly included in statements to reduce stigma, then other points should be emphasized: substance abuse tends to co-occur at a high rate with other psychiatric disorders, such as bipolar (reviewed by Mueser et al. 1995) and personality disorders (Gerstley et al. 1990; O'Malley et al. 1990); and substance abuse raises the risk

for violence in psychiatric disorders other than schizophrenia (Swanson et al. 1990). Finally, because of the greater overall incidence of substance abuse compared with schizophrenia (considering single *DSM–IV* diagnoses), individuals in the community are more likely to have contact with someone with a substance abuse disorder than with schizophrenia (Swanson and Holzer 1991). Therefore, information on substance abuse and schizophrenia vis-à-vis violent behavior needs to be presented within the broader context of substance abuse, violence, and psychopathology in general (e.g., Moss and Tarter 1993).

A few caveats should be noted about the current findings. First, the study focused on attitudes toward individuals with a severe psychiatric disorder, rather than on behavior. Because attitudes and behavior toward persons with a mental illness do not always correspond (Farina 1981), the implications of the results for behavioral change are unknown. The relationship between attitudes and behaviors is complex (Eagly and Chaiken 1993), so the observed effects on attitudes should not be quickly discounted. Second, the stability of our findings was not evaluated, because no followup assessment was included in the study. Third, the findings obtained with the current sample of undergraduate students should be replicated with individuals in the community to determine the generalizability of the results. However, affecting the attitudes of college-age individuals toward persons with severe mental illness may be an important step in changing their behaviors toward this population after they leave school. Fourth, although this study sheds light on some methods for reducing stigma toward persons with severe mental illness, it does not address an equally important issue, how such negative perceptions are initially developed. Identifying the origin of stigmatizing attitudes, perhaps in childhood or adolescence, may further improve strategies to reduce stigma toward persons with severe mental illness. Finally, the study did not directly measure stigma per se, but perceptions of dangerousness, an important component of stigmatization. Future research may indeed show that reducing perceptions of dangerousness is a necessary precondition for stigma reduction.

The present study represents an initial attempt to mitigate stigmatization by directly addressing individuals' fears regarding violence and mental illness. If these findings can be replicated with different, more comprehensive message packages, then the next step may be to explore the impact of such information via mass media and in educational settings. Such interventions could potentially remove or lower at least one obstacle facing individuals with a severe psychiatric disorder.

Appendix 1. Text of Information Sheets

General Information #2. Schizophrenia is a psychological/psychiatric disorder composed of symptoms that affect thoughts, perceptions, mood, and behavior. Disturbance in thought processes includes ideas shifting from one unrelated subject to another (i.e., being tangential) and delusions. Delusions are fixed beliefs based on misinterpretations of experiences. Examples of delusions are the belief that one is the messiah or that one's thoughts are broadcast so that others can hear them.

Disturbances in perceptions are called hallucinations. The most common type of hallucination is the hearing of voices (i.e., voices talking to the person when no one is around). Mood disturbances can be described as either "inappropriate" (e.g., the person laughs during a sad event) or "flat" (e.g., the person shows almost no expression on her or his face). Finally, behavioral disturbance can be manifested as agitation or withdrawal from social contact.

The symptoms listed above are not constant but tend to appear intermittently (i.e., every now and then). For example, the individual may have a period in which the symptoms are pronounced (i.e., the "active" phase) followed by a period of symptom remission. This is somewhat comparable to the experience of individuals who have multiple sclerosis or chronic asthma. Individuals with schizophrenia who are compliant with medication (i.e., take it regularly as prescribed) and attend individual/family therapy sessions tend to have fewer relapses. Many of those who receive a stable regimen of medication and therapy function adequately in the community.

Acute Information #3. [This information sheet includes all of the information in the General Information sheet in addition to the following.]

People often fear individuals with schizophrenia because they believe that the disorder is linked to violent behavior. However, research concludes that there is only a weak association between major psychiatric disorders and violence in the community. Recent studies suggest that a key factor in determining violence in psychiatric patients is the presence of psychotic symptoms (i.e., hallucinations and delusions). If a person with a psychiatric disorder is in a psychotic phase (i.e., in the active phase), then the risk of violence is higher than in the "normal" population. However, if the individual is not in the active phase (i.e., the symptoms are in remission), then his or her likelihood of violence is comparable to that of the average individual without a history of mental illness.

Comparative Information #4. [This information sheet includes all of the information in the General Information sheet in addition to the following.]

People often fear individuals with schizophrenia because they believe that the disorder is linked to violent behavior. However, research concluded that there is only a weak association between major psychiatric disorders and violence in the community. Further, recent studies suggest that individuals who abuse drugs or alcohol are actually more prone to violence than individuals with schizophrenia. Specifically, the prevalence of violence is highest among individuals who abuse drugs (34.7% of patients hospitalized for drug abuse committed at least one violent act in the past year),[2] followed by those who abuse alcohol (24.6%), with schizophrenia and depression being remarkably similar (12.7% and 11.7%, respectively).

Appendix 2. Target Person Vignette

Here is a description of a 27-year-old woman(man). Let's call her(him) Jane(Jim) Johnson. About 2 years ago, she(he) was hospitalized because of schizophrenia. After receiving treatment, she(he) appears to be in remission and is doing pretty well. She(he) takes her(his) medication as prescribed and also attends weekly individual therapy with a psychologist. Jane(Jim) has a part-time job doing janitorial work. She(he) earns $4,000 a year before taxes and is doing well enough. She(he) is well groomed and known for dressing neatly.

At her(his) job, she(he) gets along well with her(his) co-workers and is on friendly terms with them. She(he) begins her(his) days chatting briefly with the people she(he) works with and then gets down to business. She(he) takes coffee and lunch breaks during the day, just like everyone else, and returns to work when her(his) coworkers do.

While on the job, Jane(Jim) checks her(his) work carefully and doesn't go on to something else until it is finished. This might slow Jane(Jim) down a little, but she(he) is never criticized for the quality of the work she(he) completes.

Jane(Jim) is interested in meeting and dating young men(women) in the community. She(he) is considering joining a local church group to meet them. She(he) would also like to get a job that gives her(him) more responsibility and pays better than her(his) current one.

[2] *Authors' note:* It was noticed at the conclusion of this study that this sentence should have read "34.7% of individuals meeting criteria for drug abuse" because the Swanson et al. (1990) findings were based on individuals living in the community, not patients. To determine if this minor misstatement affected subjects' responses, data were collected from an additional 40 subjects comparing this information sheet with the two versions of the sentence. One-way analyses of variance were not significant for perceived dangerousness for either individuals with a mental illness in general (F (1,39) = 0.17, NS), or the target individual (F (1,39) = 0.60, NS). Therefore, the erroneous sentence did not affect the original subjects' ratings of perceived dangerousness.

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