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The Relationship between Insight and Social Skill in Persons with Severe Mental Illness

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The relationship of insight with the social behaviors of outpatients with severe mental illness (SMI) was investigated. Participants' engaged in two social interactions (*i.e.*, stigmatizing and nonstigmatizing), each with a different research confederate. The participant's behavior was later coded for the presence of various self-presentation and social skill variables. Results indicated that greater insight was associated with better overall social skill, less observed strangeness, and greater self-disclosure of one's mental illness. Furthermore, the three measures of insight, one based on self-report and two interview-based, were all highly intercorrelated, suggesting that they are measuring a similar construct. Finally, consistent with previous research in the area, greater insight was associated with less severe psychiatric symptoms. Implications of these findings for future research are discussed.

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There has been an increase in research on insight and severe mental illness (SMI; *e.g.*, schizophrenia, schizoaffective disorder) over the past several years. In particular, insight has been investigated in relation to medication compliance, treatment outcome, vocational rehabilitation, and cognitive functioning (Bartko et al., 1988; Lysaker and Bell, 1994; McEvoy et al., 1989b, 1996). Less attention has been given, however, to the relationship of insight with social functioning in SMI. This relative inattention may be important. Lysaker et al. (1998) suggest that poor insight into one's mental illness may interfere with social relationships due to a discrepancy between how persons with SMI see themselves and how others view them. Such discrepancies may cause problems in those very communication and social skills needed for interpersonal interactions.

There has, however, been some promising recent research in this area. Lysaker et al. (1998) examined the association between insight and interpersonal functioning in outpatients with schizophrenia using the Scale to Assess the Unawareness of Mental Disorder (SUMD; Amador et al., 1994) and a quality of life scale. Subjects with impaired insight had significantly lower scores in areas of interpersonal relatedness (*e.g.*, frequency of social contacts) and basic interpersonal skills (*e.g.*, empathy, rapport). In a similar vein, others have found relationships between decreased awareness of mental disorder and increased social isolation, decreased social activities, lower social functioning, and smaller social networks (Amador et al., 1994; Dickerson et al.,1997; Smith et al., 1999; White et al., 2000). In sum, the majority of studies that have examined social functioning and insight have found a relationship between poor insight and social functioning deficits.

A primary limitation of the above studies was that they did not measure the *behavior* of persons with SMI during actual social interactions. Instead, social behavior was typically based on self-report inventories and quality of life-type interviews (Dickerson et al., 1997; Lysaker et al., 1998; Smith et al., 1999; White et al., 2000). The use of self-report data alone may be questionable in light of the potential presence of poor awareness. In other words, might poor insight militate against accurate reporting of one's level of social functioning? Doyle et al. (1999) indirectly address this issue by suggesting that level of insight mediates the relationship between subjective and objective assessments of quality of life. If this is true, then caution needs to be implemented when interpreting results based on self-report measures of social behavior alone. Thus, the role of insight on the actual social skills of persons with SMI has not

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been examined and would greatly enhance the research in this area.

The role of insight in social behavior may not be as simple as greater insight being associated with better social skills. Rather, it is likely that insight could affect the social behavior of persons with SMI via the specific impression management strategies (or coping strategies) utilized during interpersonal encounters. For example, a person with insight into their mental disorder may be less likely to disclose personal information about their condition in situations not favorable to self-disclosure. Relatedly, they may be more likely to be anxious, relative to persons without insight into their mental disorder, in encounters in which having a mental illness is perceived negatively. Thus, level of insight may interact with social context in affecting social skills.

Impression management requires controlling one's behavior in order to make a particular impression (DePaulo, 1992). To do this adequately, individuals need to be aware of how they are portraying themselves and, in turn, how others are viewing them. It is known that people who have various stigmatizing conditions (*e.g.*, people who are HIV positive, disabled, or obese) use impression management techniques to avoid, confront, or deal with potential stigma (Crocker et al., 1998; Franke and Leary, 1991; Miller et al., 1995). These strategies include self-disclosure, destigmatization (*e.g.*, downplaying the stigma), compensation (*e.g.*, emphasizing good qualities unrelated to the stigma), and exclusion (purposively failing to mention the stigma) (Leary, 1995).

Given the cognitive impairments and decreased social interactions often found in persons with SMI, one might expect people with SMI to have difficulty in impression management because of unawareness of how others view them and of how their own actions affect others. However, research suggests that individuals with SMI do have the ability to impression manage, particularly for the attainment of specific goals (Braginsky and Braginsky, 1967; Fontana and Gessner, 1969; Kelly et al., 1971). Further, researchers in the area of psychiatric stigma have determined that individuals diagnosed with SMI report using secrecy (*e.g.*, hiding a history of psychiatric treatment), withdrawal (*e.g.*, avoidance of those who may think negatively about individuals who have been in psychiatric treatment), education (*e.g.*, teaching others about psychiatric treatment and patients), and selective disclosure as strategies for dealing with potentially stigmatizing situations (Link et al.,1989; Link and Phelan, 1999; Wahl, 1999). Such coping strategies, particularly withdrawal, can have a negative impact on social interactions (Link et al., 1992). For example, research shows that more strained social interactions result when a person with SMI believes others know about their psychiatric history, even if this knowledge is false (Farina et al., 1971). Therefore, individuals with a SMI who are in potentially stigmatizing situations use specific strategies to cope with negative interactions.

Based on information in the impression management literature (Crocker et al., 1998; Miller et al., 1995), one would expect persons with SMI, especially those with insight into their disorder, to engage in specific self-presentation strategies (Leary, 1995; Link et al., 1989; Wahl, 1999) or exhibit signs of anxiety in potentially discriminating situations (Crocker et al., 1998). However, there has been no research examining the ability of persons with SMI to impression manage in real life social interactions.

In this study, we investigated the relationship of insight to social skill and impression management strategies in persons with SMI. We examined this relationship in two interactions: stigmatizing and nonstigmatizing. We expected greater insight to be positively associated with better social skills (global and specific) during social interactions conducted in a nonstigmatizing rather than a stigmatizing social context. In addition, we expected that greater insight would be positively associated with use of self-disclosure in the positive nonstigmatizing context as compared with a potentially stigmatizing social context. Furthermore, we expected that greater insight would be positively associated with use of compensation, destigmatization, and exclusionary tactics in the potentially stigmatizing social context. In other words, we expected that the direction of the relationship between insight and social skills and impression management strategies would change as a function of social context.

Methods

Participants

Thirty participants were recruited from an outpatient day program for individuals with SMI, and all study participants voluntarily provided informed consent. One person was dropped from the study due to a diagnosis of panic disorder with agoraphobia. The final sample was comprised of 21 subjects (72.4%) diagnosed with schizophrenia, 5 (17.2%) with a diagnosis of schizoaffective disorder, and 3 (10.3%) with a diagnosis of bipolar disorder. Individuals with bipolar disorder were included in this study because of evidence indicating that persons with bipolar disorder do not significantly differ in insight compared with persons with schizophrenia

(Pini et al., 2001). Diagnoses were confirmed using the SCID-P (First et al., 1995) by an interviewer (JF) who had previously been trained to 100% agreement with other reliable interviewers with respect to primary diagnosis. Participants were excluded if they had a history of traumatic brain injury, met criteria for substance abuse or dependence in the past 3 months, or were not between the ages of 18 and 60.

The participants in the study had a mean age of 40.7 years (SD = 8.71), a mean educational level of 12.04 years (SD = 2.66), and a mean age of illness onset of 19.52 years (SD = 6.77). Male and female subjects comprised 44.8% and 55.2% of the sample, respectively. Forty-five percent of the sample were Caucasian and 55% were African-American.

Measures and Materials

Symptoms. The Brief Psychiatric Rating Scale (BPRS; Ventura et al., 1993) was administered by an interviewer (JF) who was trained to a reliability of at least .80 (based on intraclass correlations; ICCs) before the study. Based on a recent factor analysis (Mueser et al., 1997), four factors were used: affect (somatic concern, anxiety, guilty feelings, depressive mood, hostility); anergia (emotional withdrawal, motor retardation, uncooperativeness, blunted affect); disorganization (conceptual disorganization, tension, and mannerisms and posturing); and thought disturbance (grandiosity, suspiciousness, hallucinatory behavior, unusual thought content).

Insight Measures. The primary insight measure used in this study was the Insight and Treatment Attitudes Questionnaire (ITAQ; McEvoy et al., 1989a). The ITAQ is an 11-item instrument that assesses past and present awareness of illness and need for treatment (McEvoy et al., 1989a). Although this instrument was designed for use with inpatients, it was modified for use with an outpatient population. For example, instead of "At the time of admission to this hospital ...," the wording was changed to "At the time of your last admission to the hospital ...." Higher scores indicate increased insight. Internal consistency for the present study was good (*i.e.*, Cronbach's alpha = .83). Furthermore, interrater reliability was obtained by audiotaping a random number of interviews, which were scored by an independent rater. Excellent interrater reliability (ICC = .97) was established on three interviews at the beginning of the study. After the study, interrater reliability was determined on 11 random interviews, yielding an ICC of .72.

Because a modified version of the ITAQ was used in this study, two additional insight measures were added to ensure validity. These were the insight and judgment item from the Positive and Negative Syndrome Scale (PANSS; Kay et al., 1987) and the Insight Scale (IS; Birchwood et al., 1994). The primary investigator (JF), who was previously trained to administer this instrument (ICC $>$ .80), interviewed the participants with this PANSS item. The PANSS insight item is rated on a 7-point scale ranging from absent to extreme, with higher scores indicating decreased insight.

The IS (Birchwood et al., 1994) is a self-report questionnaire comprised of eight items that are divided among three factors: awareness of illness, need for treatment, and relabeling of symptoms as a mental illness. The items are rated in a forced-choice manner with agree, disagree, and unsure as the choices. Higher scores indicate greater insight. Internal consistency for this study using the alpha coefficient was .75.

Social Context Manipulation. Participants participated in two unstructured role-plays, each of 5-minute duration, with a different research confederate. Role-plays of this sort have been used extensively in previous research on social skill in schizophrenia (Ihnen et al., 1998; Mueser et al., 1996; Penn et al., 1995). All role-plays were videotaped for subsequent behavioral coding.

Before the role-play, the participants were asked to choose from the following topics to begin the role-play: politics, sports, music, movies, personal qualities, the day program they were participating in, family history, and health (physical/mental). These topics had been rated before the study by undergraduate and graduate students in psychology on a 7-point Likert scale anchored by 1 (not at all related to mental illness) and 7 (very related to mental illness). Topics given a mean score of greater than 4 were categorized as mental illness topics (*i.e.*, personal qualities, the day program, family history, health-physical/mental), whereas those with a mean score of less than 4 were categorized as nonmental illness topics (*i.e.*, sports, politics, music, movies).

The undergraduate role-play confederates were trained to act in a neutral manner (discussed below). The confederates had a standard set of questions to ask the subject and were trained to pause 5 seconds after the subject had answered a specific question before asking another one.

The role-plays differed in terms of the confederate's comfort level in interacting with someone with a mental illness. This manipulation was intended to influence the social context by creating either a stigmatizing (*i.e.*, the confederate reported not being comfortable interacting with persons with SMI) or nonstigmatizing (*i.e.*, the confederate reported being

comfortable interacting with persons with SMI) social context. Before beginning the role-play, participants received the following instructions:

> We are looking at how people who don't know each other interact when they first meet. You will be speaking with two different people. The first person with whom you will be speaking has interacted/has never interacted with people who have a mental illness. He/She may appear comfortable/uncomfortable during the interaction. We have a list here of potential topics you may be interested in talking about with this person. Why don't you go ahead and pick four topics that he/she can start the conversation with, if necessary? The conversation will last a minimum of 3 minutes and a maximum of 5 minutes. You can end the conversation after 3 minutes or you can let it go on the full 5 minutes. Just let me know when you want to stop.

In addition, she/he was asked to choose four topics from the list of eight (as discussed above) that she/he would be interested in talking about with the confederate. Participants were then led to a room where a trained confederate was sitting. The confederate opened the interaction with the following structured prompt:

> Hi, I'm _____. I see you have chosen a few topics you would like to discuss. Why don't we begin with one of these? (Choose the first one circled).

Confederates then asked specific questions in a structured order until the 5-minute role-play was completed. Questions were asked by alternating mental illness and nonmental illness topics, beginning with the participant's first circled topic.

The same instructions were given before the second role-play, except that the confederate experience and comfort level were switched. The order of confederate comfort level across role-plays was counterbalanced. The procedure was the same as above for the second role-play.

Four undergraduate research assistants, blind to the study purpose or hypotheses, were trained to code the participants' videotaped social skills. Two research assistants coded the following global social skills: overall social skill (anchored by 1 [poor] and 5 [good]), overall anxiety level (anchored by 1 [not at all anxious] and 5 [extremely anxious]), engagement (anchored by 1 [not at all engaged] and 5 [very engaged]), and strangeness (anchored by 1 [not at all strange] and 5 [very strange]. The other two research assistants coded the following specific social skills during the role-plays: eye contact, speech fluency, speech clarity, speech rate (anchored by 1 [poor] and 5 [good]), and fidgeting (anchored by 1 [none] and 5 [excessive]).

The four raters were trained on the first 12 role-plays of the study. Once satisfactory reliability had been achieved on all behaviors (*i.e.*, ICCs $>$ .70), the remaining study role-plays were rated. ICCs for the two raters coding the global social skills ranged from .70 (anxiety-stigmatizing) to .88 (overall social skill-stigmatizing) with a mean ICC of .79. ICCs for the two raters coding the specific social skills ranged from .59 (speech clarity-nonstigmatizing) to .95 (fidgeting-stigmatizing) with a mean ICC of .79.

Impression management strategies were assessed by a third pair of raters for the following behaviors: a) *illness self-disclosure*: rated as the frequency of comments referring to the person's mental illness; b) *compensation tactics*: the number of positive comments the participant makes about her/himself that are unrelated to her/his mental illness; and c) *destigmatization tactics*: the number of comments that aim to destigmatize the fact that the individual has a mental illness (*e.g.*, the subject is getting over their illness; the subject has become a stronger person as a result of their mental illness). A final impression management strategy, *exclusionary tactics*, was computed based on the number of nonmental illness-related topics selected from the list of topics before the role-plays.

The two raters were trained on the first seven role-plays of the study. Once satisfactory reliability had been achieved on all strategies (*i.e.*, ICCs $>$ .70), the remaining study role-plays were rated. ICCs for the two raters on the impression management strategies ranged from .75 (Compensation-nonstigmatizing) to .93 (compensation-stigmatizing) with an average ICC of .87.

Manipulation Check Measures

The Consumer Experience of Stigma (CES; Wahl, 1997[3]) was initially developed as a general measure of perceived stigmatization. The original CES contains two sections with a total of 19 questions. In this study, the CES was modified to serve as a manipulation check for the condition regarding the confederate's comfort level interacting with persons with SMI. Five questions from the first section of the original measure were modified to read: "I avoided telling the other person that I am a consumer," "I was treated as less competent by the other person when she/he learned I am a consumer," "I was shunned or avoided by the other person when it was

[3] Wahl O (1997) Consumer experience of stigma. Unpublished instrument, George Mason University.

revealed that I am a consumer," "I was treated fairly by the other person when he/she learned I am a consumer," and "I am worried that the other person viewed me unfavorably because I am a consumer." The modified CES was read to the participant after each of the role-plays. The participant's task was to rate the confederate on 5-point Likert scales, anchored by 1 (not at all true) and 5 (very true), with a range of 5 to 25. Higher scores indicate greater experienced stigmatization. Internal consistency for the CES for the nonstigmatizing and stigmatizing confederate conditions was .72 and .60, respectively.

Three questions were developed as a confederate check to ensure that the research confederates participating in the role-plays were perceived in a similar manner. This measure was labeled the Impression Scale. Participants were asked to rate the confederate on the Impression Scale following each of the role-plays. The Impression Scale is comprised of three items, each rated on 5-point Likert scales and anchored by 1 (below average) and 5 (above average). These items referred to the confederate's friendliness, attractiveness, and social skills. Internal consistency for the impression scale was good for both the confederate nonstigmatizing (.88) and stigmatizing conditions (.89).

Data Analytic Plan. Before testing the study hypotheses, a number of preliminary analyses were conducted. First, the concurrent validity of the modified ITAQ was evaluated by computing intercorrelations between the ITAQ and the other two measures of insight. Second, we examined the relationship between insight and symptoms. Third, an analysis was conducted on the Impression Scales to determine if the research subjects perceived the various confederates used in the role-plays differently ($N = 8$). And finally, a manipulation check was conducted on the social context variable (*i.e.*, the confederate's comfort level interacting with persons with SMI) by analyzing the effects of social context on subjects' perceived stigmatization (as measured by the CES).

Results

Concurrent Validity of the Modified ITAQ

To examine the concurrent validity of the modified ITAQ, correlation coefficients were computed among the ITAQ, IS, and the PANSS insight item. The results indicate that the three insight measures were highly intercorrelated, suggesting that they're measuring a similar construct. Specifically, the ITAQ was significantly associated with both the IS ($r = .75$, $p < .01$) and the PANSS insight item ($r = -.80$, $p < .01$), whereas the IS and PANSS were also highly correlated with one another ($r = -.46$, $p < .05$).

Due to the high intercorrelations among the two insight *interview* measures, we formed a standardized insight variable to be used in all subsequent analyses. The PANSS insight item was reverse scored, and then this new value and the ITAQ total were converted to z-scores. These z-scores were then combined to create a summary index of insight. Higher values indicate greater insight. To reduce the number of variables, the Insight Scale was dropped from subsequent analyses.

Insight and Symptoms

Pearson correlations were also computed between the combined insight variable and psychiatric symptoms. Insight was significantly inversely associated with total BPRS score ($r = -.65$, $p < .01$), and the thought disturbance ($r = -.64$, $p < .01$) and anergia factors ($r = -.35$, $p < .05$), suggesting that individuals with higher insight exhibited fewer psychiatric symptoms. The affect and disorganization factors were unrelated to insight.

Confederate and Social Context Manipulation Check Analyses

A pair of one-way analyses of variance (ANOVAs), with confederate as the grouping variable, was conducted on the Impression Scale ratings for the two confederate conditions to determine whether the confederates were perceived in a similar manner across all subjects. The results indicated that the different confederates were not perceived differently in either the nonstigmatizing confederate condition ($F[6,21] = .72$, NS) or stigmatizing confederate condition ($F[6,21] = .43$, NS).

To assess social context effects of perceived stigmatization, a paired t-test was conducted on the CES scores across the nonstigmatizing and stigmatizing social interactions. This analysis revealed that the mean CES score in the nonstigmatizing context (mean = 6.66, SD = 2.79) was significantly lower than the mean CES score in the stigmatizing context (mean = 7.83, SD = 3.15; $t[28] = -3.05$, $p < .005$), indicating that subjects experienced more stigma in the stigmatizing confederate context than in the nonstigmatizing confederate context. These findings lend support to our social context manipulation.

Primary Analyses

To investigate the hypothesis that greater insight would be associated with better social skills, particularly in the less stigmatizing social interaction, cor-

TABLE 1
Pearson Correlation Coefficients Between Insight with Global and Specific Social Skills, and Impression Management Strategies as a Function of Social Context

	Insight	
Social Skills	Nonstigmatizing Social Context	Stigmatizing Social Context
Global		
Anxiety	−0.02	0.01
Overall social skill	0.44*	0.29
Strangeness	−0.52**	−0.42*
Engagement	0.19	0.09
Specific		
Eye contact	0.18	−0.15
Speech fluency	0.21	0.05
Speech clarity	0.23	0.24
Speech rate	0.26	0.19
Fidgeting	−0.16	0.03
Impression management strategy		
Self disclosure	.49**	.40*
Compensation	.22	.14
Destigmatization	.19	.09
Exclusion	−.07	−.27

* $p < .05$; ** $p < .01$.

relational analyses were conducted between insight and the global and specific social skill variables within each social context condition. As shown in Table 1, higher insight was associated with less strangeness in both social contexts and with increased overall social skill in only the non-stigmatizing social context. No other bivariate correlations were statistically significant.

Table 1 displays the results of the correlational analyses between insight and the impression management strategies. The results indicate that greater self-disclosure of mental illness was associated with higher insight across both conditions. Insight was not associated with exclusionary, destigmatization, or compensation tactics in either social context condition.

Discussion

The present study examined the relationship of insight with social skills and impression management in persons with SMI. This appears to be the first study of its kind to investigate this relationship in the context of an actual interaction, rather than relying on self-report or interview-based assessments. The results suggest that greater insight is associated with less strangeness, better overall social skill, and a tendency to self-disclose illness; these associations were not specific to any particular social context. Contrary to expectations, there was no association between insight and the specific social skills (*e.g.*, eye contact or speech fluency) or impression management tactics other than self-disclosure. Finally, insight was highly associated with overall psychiatric symptomatology, as well as with the anergia and thought disorder factors on the BPRS.

We hypothesized that greater insight would be associated with better social skills and utilization of impression management strategies and that these associations would be specific to social context. This hypothesis was not entirely confirmed. Although we found that greater insight was associated with greater overall social skill, less strangeness, and greater self-disclosure, this pattern was not unique to any one social context. This general pattern emerged despite participants' reporting greater experienced stigmatization during the stigmatizing compared with the nonstigmatizing social interaction. Therefore, experienced stigmatization did not translate into actual behavior. One possible reason for this lack of context effect (on behavior) is that although a significant mean difference in perceived stigmatization was observed, the absolute level of stigmatization was quite small (mean = 7.83 out of a total possible score of 25). Therefore, it's possible that social context would have had a greater effect on behavior if the stigmatization manipulation was stronger. However, a stronger manipulation would have clearly raised ethical issues about unduly stressing participants, which we were not willing to do. This was why we framed the interaction in terms of the confederate's comfort level and experience, rather than feelings or prejudices toward persons with SMI. Irrespective of why insight didn't have a differential impact on behavior as a function of social context, one can conclude that insight does have a relationship with social behavior, albeit a modest one.

Greater self-disclosure was associated with more insight across both social interaction conditions. On the one hand, these results are not surprising given the findings indicating that the most commonly used strategy for dealing with stigma is advocacy and education about mental illness (Wahl, 1999). Furthermore, participants in this study may have self-disclosed across both conditions because they viewed the confederates as mental health professionals, thus making self-disclosure an appropriate strategy. However, one would expect that in a potentially stigmatizing situation, individuals would not self-disclose or be less inclined to do so. Thus, it may be that a willingness to discuss one's own personal mental illness may override social context and be the first step towards education, advocacy, and empowerment.

Two other secondary findings warrant brief discussion. First, our findings reveal that insight was highly associated with psychiatric symptomatology,

specifically overall symptoms, anergia, and thought disorder. These findings are consistent with previous research that found moderate relationships between low insight and higher overall symptomatology (Amador et al., 1993; David et al., 1992; Kemp and David, 1996; Kemp and Lambert, 1995) and delusions (Amador et al., 1994; Dickerson et al., 1997), thought disorder (Amador et al., 1994; Lysaker et al., 1994), and disorganized behavior (Amador et al., 1994). Second, the findings are consistent with recent research showing that different measures of insight tend to be highly intercorrelated. Cuesta et al. (2000) determined that the ITAQ, the SUMD (Amador et al., 1993), and the Manual for Assessment of Documentation in Psychopathology (AMDP; Guy and Ban, 1979) were highly intercorrelated and concluded that the differences between these measures are probably more an artifact of methodological differences than actual differences in measurement of insight. Sanz et al. (1998) examined five measures of insight: ITAQ, Scale for the Assessment of Insight (SAI; David, 1990), Schedule for the Assessment of Insight- Expanded Version (SAI-E; Kemp and David, 1997), Markova and Berrios (1992) Insight Scale (self-report assessment), and finally, the PANSS insight item. All were highly intercorrelated with each other, and although the correlations with the Markova and Berrios' self-report scale were more moderate, they were still significant. These findings are in accord with our own, which found a different self-report measure of insight, the Insight Scale (Birchwood et al., 1994) to be associated with the interview-based measures. Although further research needs to be conducted, these preliminary results suggest that the Insight Scale is a valid self-report measure of insight, which might be appropriate for assessing insight if interviewers and/or clinical resources are limited.

Future research should continue to examine the role of insight on actual (not self-reported) social behavior. The functional implications of poor insight are still not well understood outside the context of medication compliance. In addition, researchers should examine the insight-social behavior relationship across a greater range of social situations, with larger sample sizes, before we can confidently make conclusions. Finally, subsequent work in this area should evaluate whether any third factors, such as IQ, mediate the relationship between insight and social skill. Otherwise, the relationship between insight and social functioning may reflect the individual's level of intellectual competence, rather than a true association between these domains.

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