

The role of social skill in mediating perceived physical attractiveness among individuals with chronic schizophrenia was investigated. Twenty five inpatients participated in an unstructured role play. The physical attractiveness of the individuals was rated both before and after observation of the role play by two pairs of raters. Social skill was rated by a third pair of raters. The two ratings of physical attractiveness were only weakly correlated with one another. Social skill contributed variance independent of initial attractiveness to post-role-play attractiveness. Practical implications of the findings (i.e., stigma issues and social skills training) are discussed.

# **Physical Attractiveness in Schizophrenia**

## **The Mediating Role of Social Skill**

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**The association between physical attractiveness and social adjustment has been well established (reviewed by Burns & Farina, 1992; Eagly, Ashmore, Makhijani, & Longo, 1991; Feingold, 1992). Compared to those of average or below-average attractiveness, individuals who are physically attractive are more socially competent (Burns &**

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Farina, 1984; Goldman & Lewis, 1977), date more often (White, 1980), report higher incomes (Umberson & Hughes, 1987), and have more satisfying interactions with others (Reis, Wheeler, Spiegel, Kernis, Nezelek, & Perri, 1982). Burns and Farina (1992) hypothesize that attractive individuals receive preferential treatment throughout life, resulting in greater adjustment and better outcomes.

Physical attractiveness has also been hypothesized to play a role in the adjustment of individuals with a psychiatric disorder. Compared to control participants, individuals with a psychiatric disorder receive lower ratings on physical attractiveness (Farina, Fischer, Sherman, Smith, Groh, & Mermin, 1977; Napoleon, Chassin, & Young, 1980), even after controlling for age and socioeconomic status (Archer & Cash, 1985). These findings have been interpreted as suggesting that lower physical attractiveness in psychiatric patients results in less positive attention from others, which has a negative effect on the course and outcome of the psychiatric disorder (Farina, Burns, Austad, Bugglin, & Fischer, 1986). Some researchers have even speculated that low levels of premorbid physical attractiveness may lead to social rejection, thereby increasing vulnerability to develop psychiatric disorders (e.g., Napoleon et al., 1980).

Little attention has been paid to variables that may influence ratings of the physical attractiveness of persons with a psychiatric disorder. Among individuals with schizophrenia, one such variable may be social skill. Relative to nonpsychiatric control participants, individuals with schizophrenia demonstrate consistent deficits in social skill (e.g., speech dysfluencies; Mueser, Bellack, Douglas, & Morrison, 1991). Such deficits are likely to produce negative and/or strained interactions with others, which may generalize to perceptions of their physical attractiveness.

There is some evidence for the role of social skill in mediating perceived physical attractiveness in nonpsychiatric samples (Hope & Mindell, 1994). For example, asking questions during a conversation has been found to result in higher ratings of physical attractiveness (Muehlenhard, Koralewski, Andrews, & Burdick, 1986). Mueser, Grau, Sussman, and Rosen (1984) reported that perceived physical attractiveness in college students varied with the pleasantness of the target individual's facial expression, a finding that was replicated in a

group with developmental disabilities who participated in social skills training (Mueser, Valenti-Hein, & Yarnold, 1987). These studies suggest that deficits in social skill, especially a paucity of behaviors (e.g., pleasant facial expression, reciprocity), may lead individuals to appear less physically attractive. If this is the case, then studies that have reported lower levels of physical attractiveness in psychiatric patients (e.g., Farina et al., 1977) may be tapping social skill deficits, rather than invariant physical features.

Despite evidence suggesting that social skill may mediate perceived physical attractiveness, research has not examined this issue in psychiatric patients. The present study was conducted to investigate the contribution of social skill to ratings of physical attractiveness in individuals with chronic schizophrenia. To evaluate the effects of skills on attractiveness, independent ratings of physical attractiveness were obtained of patients with schizophrenia based on still video images (i.e., pausing a videotape) and after observing them engage in a brief social interaction. We expected that observing a patient with schizophrenia interact with others would influence his or her perceived physical attractiveness. Therefore, we hypothesized that independent ratings of social skill would be more strongly correlated with ratings of physical attractiveness made by judges who observed patients' interactions than judges who did not.

## METHOD

Twenty five inpatients with chronic schizophrenia from the Medical College of Pennsylvania (MCP) Research Unit at Norristown State Hospital participated in the study. Respondents were between the ages of 18 and 62 and met *DSM-III-R* criteria for schizophrenia (18) or schizoaffective disorder (7) based on the Structured Clinical Interview for *DSM-III-R*, patient version (Spitzer & Williams, 1985). The patients with schizophrenia and schizoaffective disorder did not differ in any demographic or clinical variables as determined by chi-square analyses, *t* tests, and a multivariate analysis of variance ( $ps > .05$ ).

Structured clinical interviews for *DSM-III-R* (SCIDs) were conducted by one of three trained interviewers (three Ph.D. psychologists) who had participated in a training course and demonstrated satisfac-

tory levels of interrater reliability ( $kappas > .80$ ). Four study patients were rated by two interviewers with 100% agreement on the final SCID diagnosis.

The sample had the following demographic characteristics: age: 45.84 ( $SD = 9.37$ ); gender: males = 11, females = 14; education (years) = 11.0 ( $SD = 1.94$ ); age of illness onset = 21.56 ( $SD = 5.82$ ); duration of most recent hospitalization (months) = 122.56 ( $SD = 130.48$ ), and chlorpromazine equivalent = 674.15 mg ( $SD = 532.95$ ).

## MEASURES

### Social Skill

Social skill was assessed with the conversation probe (CP) role play test. The CP requires the participant to initiate and maintain a conversation with a stranger for 3 minutes. Participants were informed that a confederate would play a new volunteer on the ward and that they would have 3 minutes to get to know one another. A detailed description of the instructions given to participants and confederate training is summarized in our previous research (Penn, Hope, Spaulding, & Kucera, 1994; Penn, Mueser, Spaulding, Hope, & Reed, 1995).

Two research assistants, unfamiliar with the patients and blind to all study assessments, made overall ratings of social skills. Ratings of overall social skill (SOCIAL SKILL—the overall effectiveness of the participant as a communicator, including verbal, nonverbal, and paralinguistic components) were made on an anchored 5-point Likert-type scale ranging from 1 (*poor*) to 5 (*good*). Raters were trained on 10 CPs, randomly selected from the total set of CPs. When satisfactory reliability had been achieved, the remaining CPs were rated. The intraclass correlation coefficient (Shrout & Fleiss, 1979) between the two raters for overall social skill was .78.

### Attractiveness

Physical attractiveness was rated by two pairs of independent raters. Both pairs of raters were instructed to rate the physical attractiveness of the participant. Ratings were made on an anchored 5-point Likert-

**TABLE 1**  
**Intercorrelations Between Social Skill**  
**and the Two Ratings of Physical Attractiveness**

<i>Variable</i>	<i>ATTRACT1</i>	<i>ATTRACT2</i>
SOCIAL SKILL	.09	.48**
ATTRACT1	—	.43*

NOTE: SOCIAL SKILL = overall social skill; ATTRACT1 = physical attractiveness at the beginning of the role play; ATTRACT2 = physical attractiveness after watching the role play. \* $p < .05$ ; \*\* $p < .01$  (Bonferroni corrected).

type scale ranging from 1 (*well-below-average attractiveness*) to 5 (*well-above-average attractiveness*). The first pair of raters was instructed to watch the first 2 seconds of the role play (with the audio off) before making their ratings (ATTRACT1). The second pair was instructed to watch the entire role play (audio and visual) before making their ratings (ATTRACT2). The two pairs of raters were unaware of both the ratings of social skills and each others' ratings of physical attractiveness.

Raters were trained on 30 CPs from a previous study with schizophrenia patients (Penn et al., 1995). When satisfactory reliability had been achieved, participants in the present study were rated. Intraclass correlations (ICCs) between the two raters were .79 and .71 for ATTRACT1 and ATTRACT2, respectively.

## RESULTS

Table 1 summarizes the intercorrelations (one-tailed significance tests) between SOCIAL SKILL and ATTRACT1 and ATTRACT2. The two ratings of attractiveness were significantly correlated, although they shared only 18% variance. Overall social skill was only associated with post-role-play physical attractiveness (ATTRACT2). A  $t$  test of dependent correlations (Cohen & Cohen, 1983) revealed that the relationship of social skills with ATTRACT2 was significantly different from its association with ATTRACT1 ( $t = 1.98$ ,  $p < .05$ ; one-tailed significance test).

To determine if social skill contributed variance beyond initial attractiveness to post-role-play attractiveness, a partial correlation was

conducted between ATTRACT2 and SOCIAL SKILL after controlling for ATTRACT1. The correlation was significant ( $r = .49, p < .01$ ), indicating that SOCIAL SKILL made an independent contribution to ATTRACT2.

## DISCUSSION

The results of the present study suggest that social skill relates to the perceived physical attractiveness of individuals with chronic schizophrenia. Social skill had a significantly stronger relationship with ratings of physical attractiveness made after a role play than with ratings of attractiveness made at the beginning of the role play. Furthermore, social skill was associated with post-role-play physical attractiveness even after controlling for initial ratings of attractiveness. Thus physical attractiveness after a role play among individuals with schizophrenia is a function of both appearance and social skill.

The present study has potential relevance for the reintegration of patients with schizophrenia into the community. Individuals with serious psychiatric disorders are stigmatized, even in the absence of aberrant behavior (Link, Cullen, Frank, & Wozniak, 1987). Deficient social skills may augment community residents' negative perceptions of the mentally ill through decreasing the patient's perceived attractiveness. Such negative impressions could lead to a compromise in the recovered patient's social network, making the person more vulnerable to stress, relapse, and negative outcome. Thus, in addition to carrying the label of mentally ill, a second barrier may interfere with acceptance into the community, namely, being perceived as unattractive, and hence undesirable.

In summary, the findings indicate that individuals use information about social skill in their evaluation of the physical attractiveness of inpatients with schizophrenia. Therefore, social skills training for patients with schizophrenia could have a multitude of effects beyond that of skill remediation. Future research should investigate which components of social skills (e.g., paralinguistic skills) are especially relevant to ratings of physical attractiveness.

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