CHAPTER 1

Schizophrenia, Social Skills, and Recovery

Humans are social creatures who live, interact, cooperate, and flourish with other people. The ability to interact effectively with other people, and to establish and sustain good interpersonal relationships, is critical to reaping many of the benefits of living, ranging from work and the enjoyment of leisure activities to independent living to friendships and intimate relationships. And yet it is difficulties in these very areas, broadly referred to as *social functioning*, that are the hallmark feature of schizophrenia, and are common in many other psychiatric disorders as well.

People with schizophrenia and other serious mental illnesses often experience many difficulties in social functioning. Not only does reduced social contact and social support increase the chances of symptom relapses and hospitalizations, but the loneliness that accompanies them also contributes to depression, self-stigma, poorer physical health, and premature mortality (Badcock, Adery, & Park, 2020; Fulford & Mueser, 2020). In recent years, the concept of recovery from serious mental illness has been redefined to shift the traditional focus on symptom remission to an emphasis on helping people live meaningful and rewarding lives in the community, despite any persistent symptoms they may experience (Anthony, 1993; Bellack, 2006). The quality of individuals' social relationships has an important bearing on their personal experience of recovery and is a primary concern for many people. Helping individuals with schizophrenia and other serious mental illnesses improve their ability to connect with other people, and to actively participate in close, meaningful, and rewarding relationships, is an important recovery goal for many individuals, and a vital ingredient to having a satisfying quality of life.

There is no easy solution to improving social functioning. However, there is realistic hope, bolstered by abundant evidence, that individuals can learn how to have rewarding and effective relationships. This book provides the guidance and tools for accomplishing this goal, using state-of-the-art teaching methods that have been informed by decades of clinical experience and up-to-date delineation of interpersonal skills.

For over 50 years, clinicians and researchers have worked on developing and refining a systematic approach to improving social functioning in people with schizophrenia and other serious mental illnesses. This approach focuses on teaching the specific personal (or social) skills necessary for communicating with and understanding other people. *Social skills training* (SST)

is currently the most effective intervention for improving social functioning in schizophrenia. Although the basic methods for SST were developed over many years, the approach has continued to evolve and make advancements. Furthermore, as social mores evolve over time and with them the norms of socially appropriate behavior, and as new technologies for communicating such as email, texting, and videoconferencing are developed and become commonly used, the actual interpersonal skills required for effective social functioning change and require regular updating.

In this chapter, we provide background information to understanding SST and its role in helping people with schizophrenia and other serious mental illnesses make progress toward recovery. We begin with a broad discussion of what social skills are, followed by a review of the theory underlying the SST approach to improving social functioning. We then describe the components of social skills, which serve as the building blocks for effective interpersonal behavior and are the primary focus of SST. To illustrate the importance of these components, we delve into the nature of some of the specific interpersonal skills required for effective interactions in several common situations that are especially difficult for people with schizophrenia.

DEFINING SOCIAL SKILLS

Broadly speaking, social skills can be defined as the ability to get one's affiliative and instrumental needs met during interactions with others (Liberman, DeRisi, & Mueser, 1989). A more nuanced definition of social skills is:

> Rather than providing a single, global definition of social skill, we prefer a situation-specific conception of social skills. The overriding factor is effectiveness of behavior in social interactions. However, determination of effectiveness depends on the context of the interaction (e.g., returning a faulty appliance, introducing oneself to a prospective date, expressing appreciation to a friend) and, given any context, the parameters of the specific situation (e.g., expression of anger to a spouse, to an employer, or to a stranger). (Hersen & Bellack, 1976, p. 562)

More specifically, social skills involve the

> ability to express both positive and negative feelings in the interpersonal context without suffering consequent loss of social reinforcement. Such skill is demonstrated in a large variety of interpersonal contexts, and it involves the coordinated delivery of appropriate verbal and nonverbal responses. In addition, the socially skilled individual is attuned to realities of the situation and is aware when he is likely to be reinforced for his efforts. (p. 562)

Two aspects of the above definitions warrant special mention. First, socially skilled behavior is situationally specific. Few, if any, aspects of interpersonal behavior are universally or invariably appropriate (or inappropriate). Both cultural and situational factors determine social norms. For example, in U.S. society, kissing is sanctioned within families and between lovers, but not between casual acquaintances or in the office. Direct expression of anger is more acceptable within families and toward referees at sporting events than toward an employer. The socially skilled individual must know when, where, and in what form different behaviors are sanctioned. Thus, social skill involves the ability to perceive and analyze subtle cues that define the situation as well as the presence of a repertoire of appropriate responses.

Second, social competence involves the maximization of reinforcement. Marriage, friendship, sexual gratification, employment, service (e.g., in stores, restaurants), and membership in a community are all powerful sources of reinforcement that hinge on social skills. Individuals with poorer skills are less likely to succeed in many of these spheres and, consequently, experience anxiety, frustration, and isolation, all of which are especially problematic for people with schizophrenia and contribute to the problem of loneliness (Lim, Gleeson, Alvarez-Jimenez, & Penn, 2018). Furthermore, difficulties having meaningful relationships with other people, getting and sustaining work, and getting one's daily living needs met may increase the risk of relapse, whereas enhanced social competence may decrease that risk (Liberman et al., 1986).

SOCIAL SKILLS AND SOCIAL BEHAVIOR

SST is based on the behavioral model of social skills outlined in Table 1.1. The following discussion elaborates the elements of the social skills model. First, interpersonal behavior is based on a distinct set of *skills*. The term *skill* is used to emphasize that social competence relies on a set of *learned* behaviors, rather than traits, needs, or other internal processes. Conversely, lack of social competence is often the result of impairments in social skills, such as the inability to perform a skill or not knowing when it is appropriate to use a skill. Basic aspects of social behavior are learned in childhood, while more complex behavioral repertoires, such as dating and job interview skills, are acquired in adolescence and young adulthood. Some elements of social competence, such as the facial expression of affect, are not learned, but are genetically "hard-wired" at birth. Nevertheless, research shows that virtually all social behaviors are *learnable*; that is, they can be taught or modified by experience or SST.

As indicated in Table 1.1, problems in social functioning result from three circumstances: when the individual does not know how to perform the skill appropriately, when they do not use skills in their repertoire when skills are called for, or when appropriate behavior is undermined by socially inappropriate behavior. The first of these circumstances is especially common in schizophrenia.

There are three reasons why people with schizophrenia often have insufficient interpersonal skills. First, some people who later develop schizophrenia may have had subtle attention and other cognitive difficulties in childhood before the onset of the disorder, which interfered with the learning of social skills and development of rewarding social relationships as they grew older (Walker & Lewine, 1990). Second, because schizophrenia often develops in late adolescence or young adulthood, it can interfere with a critical period for mastery of adult social roles and skills, such as dating and sexual behaviors, work-related skills, and the ability to form and maintain adult

TABLE 1.1. The Social Skills Model

1. Social competence is based on a set of component response skills.
2. These skills are learned or learnable.
3. Problems in social functioning result when:
   a. The requisite behaviors are not in the person's behavioral repertoire.
   b. The requisite behaviors are not used at the appropriate time.
   c. The person performs socially inappropriate behaviors.
4. Social dysfunction can be rectified by SST.

relationships. In addition, the onset of psychotic symptoms is frequently preceded by a decline in cognitive functioning (MacCabe et al., 2013; Mollon, David, Zammit, Lewis, & Reichenberg, 2018). The combined effects of cognitive decline and the onset of symptoms in the early stages of schizophrenia may deprive individuals from learning critical social skills during this period of their lives. Third, as a result of schizophrenia and the social stigma associated with it, many individuals lead relatively isolated lives (Johnstone, Owens, Gold, Crow, & MacMillan, 1984) and are not actively involved in fulfilling roles such as working, going to school, or parenting. This lack of regular contact with peers limits their opportunities to engage in age-appropriate social relationships, and the ability to acquire and practice appropriate adult roles. Moreover, skills mastered earlier in life may be lost because of disuse or lack of reinforcement by the environment.

Other Factors That Affect Social Functioning

The social skills model outlined in Table 1.1 posits that effective social skills are a critical factor contributing to good social functioning. In addition to social skills per se, several other factors can influence social behavior in schizophrenia, as summarized in Table 1.2.

Psychotic Symptoms

Positive symptoms (or *psychotic symptoms*) such as hallucinations, delusions, or bizarre behavior are perceptions, thoughts, or behaviors that people with a mental illness experience and that people without a mental illness do not. It should not be surprising that an individual hearing highly intrusive voices, or feeling jeopardized by malevolent forces, would have difficulty focusing on social interactions. They can have difficulty fulfilling social roles and behaving in a socially

TABLE 1.2. Factors That Can Affect Social Performance

1. Psychotic symptoms
2. Motivational factors
   - Goals
   - Expectancies for success and failure
   - Negative symptoms
3. Affective states
   - Anxiety
   - Depression
4. Environmental factors
   - Lack of reinforcement for efforts
   - Lack of resources
   - Social isolation
   - Stigma of mental illness
5. Neurobiological factors
   - Information-processing problems
   - Medication side effects

appropriate manner at the height of a symptom exacerbation. Furthermore, the distracting and distressing effects of hallucinations and delusions may be longer standing for the significant number of people with schizophrenia who experience persistent psychotic symptoms (Goghari, Harrow, Grossman, & Rosen, 2013).

However, research indicates that clients with schizophrenia have marked impairments in social competence even when their psychotic symptoms are well managed; conversely, many clients can learn more effective ways of interacting even when they have persistent symptoms. Psychotic symptoms may contribute to problems in social functioning, but they do not explain the extent of difficulties in social functioning in this population.

Motivational Factors

Many individuals with schizophrenia state that improving social relationships is an important personal goal, but also demonstrate an aversion to interactions with others despite adequate desire. Several factors seem to be involved in this pattern. First, it is common for individuals to have a history of social difficulties, including social rejection and failure. As a result, they learn that it may be safer to minimize social interactions than to risk further failure or censure. Second, most clients are engaged in a lifelong struggle to find an equilibrium between controlling their symptoms, limiting their exposure to stress and negative feelings, and maintaining the best possible quality of life. Although they may want to have better social relationships and take on more demanding social roles, the challenges associated with successfully navigating the social environment may seem great and lead to avoidance.

Third, reduced motivation is part of a constellation of symptoms in schizophrenia referred to as negative symptoms (Andreasen, Flaum, Swayze, Tyrrel, & Arndt, 1990). *Negative symptoms* are perceptions, thoughts, or behaviors that are reduced or missing in people with a mental illness compared to people with no mental illness. Common negative symptoms include reduced motivation to pursue social relationships or work, difficulty initiating and following through on goals, reduced energy, reduced anticipation and experience of positive emotions, reduced emotional expressiveness, and difficulty thinking of things to say during conversations. While negative symptoms have an important impact on social functioning, they are not impervious to treatment, and in fact can improve with SST (Cella et al., 2023).

Affective States

As indicated earlier, social interaction often causes anxiety for individuals with schizophrenia, which leads to avoidance of social situations. Moreover, clients frequently seek to escape from social interactions initiated by others. Research has shown that clients are particularly sensitive to conflict and criticism and often seek to withdraw from potential conflict situations, rather than trying to resolve a disagreement with someone, or sticking up for themselves when they are being taken advantage of or are unjustly accused of something (Bellack, Mueser, Wade, Sayers, & Morrison, 1992).

Another affective state that can influence social interactions and functioning is depression. Although positive and negative symptoms are central to the diagnosis of schizophrenia, depression is one of the most common and consistent symptoms of the disorder, which often first appears before the onset of psychotic symptoms and persists into older age (Häfner & an

der Heiden, 2008). When people feel depressed, they have a bleak and pessimistic outlook on life, and their energy is often sapped, resulting in avoidance of social situations or not trying their best, due to beliefs that they are doomed to failure or it's not worth the effort. People who are depressed also tend to convey their feelings to others in subtle, unintentional ways, such as through their facial expressions, voice tone, and seeming lack of interest during conversations. Other people pick up on these signs, which make social interactions with the person less rewarding and can lead to avoidance of the person and their associated negative feelings. It is natural for people to try to avoid spending time with someone who is depressed because those feelings can "rub off" on the other person. In fact, research shows that someone living with a person who has depression can themself become depressed (Coyne et al., 1987).

Environmental Factors

Three aspects of the environment often make it difficult for clients with schizophrenia to use their social skills effectively. First, as their interpersonal skills tend to be less well developed, their performance is more unusual or inconsistent with cultural norms of interaction. Unfortunately, many people are not tolerant of idiosyncrasies or social errors and tend to be unsympathetic, impatient, or overtly critical of the person with impaired social functioning. As a result, clients are not reinforced for their efforts and, in some circumstances, may receive a critical or hostile response. Hence, they tend to become wary of engaging in social interactions.

Second, many clients are unemployed and live in harsh economic circumstances. They do not have the resources to participate in social recreational activities that they might otherwise be able to succeed in and enjoy. Finally, many clients are isolated and have constricted social networks. The illness is stigmatizing, leading others to avoid them. In addition, repeated symptom exacerbations and periods in the hospital can disrupt relationships and gradually remove clients from the social environment. Friendships generally develop from the workplace or school, hobbies, volunteer activities, child rearing, and other activities that individuals with schizophrenia often do not participate in. This results in the social contacts of many clients being limited to other clients, mental health staff, and/or family members.

Cognitive Factors

Several significant neurobiological factors affect social behavior in schizophrenia. The illness is characterized by significantly reduced information-processing speed, which affects attention, learning, and remembering (Hochberger et al., 2020), and therefore social behavior. Difficulties with attention and reduced information-processing speed often make it harder for people with schizophrenia to track conversations, and to discriminate important from unimportant stimuli, such as what their interpersonal partner is saying versus voices coming from another conversation or the TV. They may also have problems with concentrating, focusing their attention, sustaining attention over time, or focusing in difficult conditions such as when under stress or when presented with a highly complex task (Krkovic, Moritz, & Lincoln, 2016). Thus, they may have great difficulty in attending to what someone is saying if the person speaks rapidly or presents a lot of complex information, if there are distractions (e.g., other conversations going on in the background), if the other person is angry and increasing their level of stress or anxiety, or if the person is providing confusing cues (e.g., subtlety or sarcasm).

People with schizophrenia also frequently have problems with memory, especially with short-term verbal memory (e.g., what someone said or told them to do) and working memory (e.g., ability to retain information in memory while making a decision or solving a problem). The problem does not seem to be one of forgetting as much as difficulty in initial learning or accessing information that has been learned (e.g., as when you cannot remember a name). Individuals with schizophrenia can be perceived as forgetful or distracted, and they may be accused of not paying attention or not caring about important things. In fact, the real problem may be that the information is not presented in a way that adjusts for their attention problems (e.g., slowly, clearly, and with repetition) or that they simply cannot remember what they did hear unless they are provided with reminders or prompts.

A third important problem area involves higher-level cognitive abilities or *executive functions*. People with schizophrenia often have trouble in problem solving, in part because they have difficulty in drawing abstractions or deducing relationships between events. These difficulties can limit their ability to have mutual, long-term, intimate relationships, or to handle many challenging jobs where some conflict and problems are inevitable. Other related executive problems include difficulty organizing mental efforts, such as initiating and maintaining a plan of action. As a result, individuals' reasoning and problem solving often appear to be disorganized or difficult to follow.

The cognitive difficulties experienced by most people with schizophrenia are not severe (e.g., as compared to the memory impairment in Alzheimer's disease), but they can nevertheless disrupt social behavior and the ability to fulfill social roles. The fact that these cognitive difficulties cause significant problems without being very noticeable to other people sometimes adds to their negative effects. For example, family members and others often get frustrated and angry with the person when they fail to respond or do things that they appeared to understand (e.g., requests for favors, directions for taking medications).

Components of Social Skills

As specified previously, social competence is based on a distinct set of component skills. These components can be roughly divided into two broad sets: expressive skills and social perception skills. Table 1.3 provides a list of the most important skills for schizophrenia, including some additional skills that reflect the reciprocal nature of social interaction.

Expressive Skills

There are three types of expressive behaviors that contribute to the quality of social performance: verbal behaviors, paralinguistic behaviors, and nonverbal behaviors. The social skillfulness of all expressive behaviors is influenced by the situation and relationship between the people interacting, with social norms varying to some extent across different cultures. For this discussion, we refer to normative expressive skills based primarily on Western cultures. Chapter 14 provides more information about adapting SST to different cultural contexts.

Verbal behavior. The form, structure, content, and number of words we use is referred to as *verbal behavior.* Socially skilled individuals are easy to understand. They use vocabulary and sentence structure that are sensible to their audience. Conversely, sometimes clients with

TABLE 1.3. Components of Social Skills

Expressive behaviors
Verbal behavior
Speech content
Form and structure of speech
Number of words used
Paralinguistic features
Voice volume
Speech rate
Pitch
Intonation
Nonverbal behaviors
Eye contact (gaze)
Posture
Facial expression
Proximics (interpersonal distance)
Kinesics (gestures and body movements)
Social perception (receptive) skills
Attention to and interpretation of relevant cues
Emotion recognition
Knowledge of social mores and demands of the specific situation
Interactive behaviors
Response timing
Use of social reinforcers
Turn taking

schizophrenia are difficult to follow, in part because they use language in an unusual manner that differs from cultural norms. They may use common words to mean something very idiosyncratic, create neologisms (words that are not real words), or even have mixed-up syntax, making it difficult for the listener to understand what is being said. Moreover, many clients have difficulty thinking of relevant and interesting things to say in conversations. This difficulty can be compounded by the fact that many people with schizophrenia do not work or go to school, keep up on the news or attend to current events, and live relatively restricted lives. Hence, even when they want to converse, they may not have as rich a variety of things to talk about.

Paralinguistic features. How one speaks and presents oneself may be as important as what one says. The term *paralinguistic* refers to characteristics of the voice during speech, including volume, pace, intonation, and pitch. Speech that is very fast is difficult to understand; speech that is very soft may be difficult to hear; speech that is very slow, very loud, or lacks tonal variation can be unpleasant to listen to. High-pitched (e.g., shrill) voices may also be annoying, especially as the volume increases. Frequent speech dysfluencies (e.g., "uh" or "um," repeating words) and lengthy pauses may also make it difficult or awkward for the listener. These voice and speech characteristics are important for interpreting meaning, as well as for the listener's interest and enjoyment.

The pace, volume, and intonation of speech are especially important in communicating affect or emotion. Flattened tone, slow pace, and low volume often reflect boredom, depression, or fatigue, but they may also signal a romantic intention (e.g., a slow, deep, sultry voice quality). Loud volume (e.g., raising one's voice) is often associated with anger. Rapid pace and high pitch can reflect excitement or fear. Changes in these characteristics are also important in signaling meaning and feelings. For example, increasing loudness can be used to emphasize a point. One of the most common symptoms of schizophrenia is blunted affect, which is marked by a relatively monotonic voice quality and slower rate of speech (and lack of facial expressiveness) that can make it more difficult for the listener to hear and understand. As a result of this reduced expressivity in some individuals with schizophrenia, people interacting with them frequently think that they are not interested or fully engaged in the conversation. However, this assumption is often incorrect, as research shows that blunted affect in people with schizophrenia is not related to reduced emotional experience (Kring & Elis, 2013). One important implication of this for SST is that people with schizophrenia often benefit from both practicing and honing their expressive skills *and* from learning how to convey their feelings with words (e.g., "I feel . . . ").

Nonverbal behavior. Similar to paralinguistic features, *nonverbal behavior* also affects one's interpersonal impact. Facial expression is, perhaps, the primary cue to emotional state: smiling, frowning, grimacing, glowering, and other expressions are substantially reflexive correlates of our mood and feelings. Subtle changes in the muscles around the mouth and eyes signal annoyance, curiosity, surprise, pleasure, or any number of other emotional reactions to what the speaker is saying or doing.

The eyes have often been regarded as the "window to the soul." Good eye contact is often associated with strength, authority, and truthfulness. Lovers will look deeply into each other's eyes. Conversely, "shifty" eyes or avoidance of eye contact is thought to reflect anxiety, discomfort, or dishonesty. Wide-open eyes and dilated pupils can signal heightened interest or fear, whereas narrowed eyes and contracted pupils are associated with suspiciousness, annoyance, or anger. The eyes also play an important role in the flow of conversation. Typically, the speaker looks directly toward the listener's eyes, and the listener moves their gaze around the speaker's face. When the speaker is ready to pause and shift the floor to the listener, they break off eye contact; similarly, the listener wanting to speak tries to catch the speaker's eye to signal the desire for a floor shift. Individuals with schizophrenia tend to be gaze-avoidant. They are uncomfortable in social situations and seem to be especially sensitive to maintaining eye contact. On the other hand, people with paranoia may exhibit an unblinking stare that makes the listener uncomfortable or even fearful.

Posture may denote feelings, interest, and authority. A relaxed posture usually signals comfort, whereas muscular tension (e.g., balled fist, pursed lips, forward lean) signifies arousal or tension. Similarly, leaning forward while speaking or listening is associated with interest and attention, whereas leaning away may reflect fear, distaste, or discomfort. The latter stance is characteristic of many clients with schizophrenia, who are uncomfortable in social interactions.

Proximics, a related behavioral category, refers to the distance between people during their interactions (Tootell et al., 2021). There are fairly clear, albeit unwritten, cultural rules for the comfortable and appropriate distance between two people during conversations. The acceptable distances vary according to the nature of the relationship and gender, as well as across cultures.

For example, familial and romantic relationships allow closer contact than is permitted between employer and employee, especially when they are of the opposite sex.

Strangers or casual acquaintances are expected to remain farther apart than friends, although the acceptable distances shorten in crowded subway cars or elevators. A male client who gets as close to a female staff member in an office or on the ward as in a crowded elevator would be perceived as threatening and displaying inappropriate behavior; conversely, if the same staff member approached him to take his blood pressure, standing close to the staff member would be entirely acceptable. Many clients with schizophrenia are uncomfortable in close interpersonal situations and maintain especially large interpersonal distances (Holt, Boeke, & Coombs, 2015). Alternatively, some clients with schizophrenia stand very close to the other person, making them uncomfortable.

These diverse behavioral elements identified here are each important by themselves, but their impact and interpretation are generally a function of their relationship to one another. When the different components are consistent with one another, they serve to reinforce the speaker's message, as when someone says, "I am angry," in a loud and slow voice, makes direct eye contact with the listener, and has a tense posture with balled fist, clenched teeth, and a forward lean. Conversely, when someone says, "I'm not afraid of you," in a rapid and tremulous voice, avoids eye contact, trembles, and leans backward, the verbal content must be interpreted considering these inconsistent paralinguistic and nonverbal cues.

Social Perception Skills

Regardless of an individual's ability to use socially skillful behaviors, they cannot be effective without accurate perception of the social situation. The socially skillful individual attends to the interpersonal partner, analyzes the situation, and knows when, where, and how to structure their response. This combination of attention, analysis, and knowledge is generally referred to as *social perception* or *social cognition* (Corrigan & Penn, 2001; Strack & Förster, 2009). Not surprisingly, individuals with schizophrenia often have particular difficulty in this area (Penn, Corrigan, Bentall, Racenstein, & Newman, 1997).

First, as previously discussed, clients with schizophrenia have significant difficulties with attention. Effective social perception requires the person to detect a rapidly changing series of facial expressions, verbal content with shifting intonation, and subtle gestural and postural changes. Individuals with schizophrenia may not be able to pick up all of the relevant cues provided by a partner. In addition, accurate interpretation of these various cues requires the individual to integrate the diverse pieces of information; remember them; be able to integrate current information with previous experience (e.g., "Does Susan express anger directly, or does she do it indirectly by talking more slowly, looking slightly tense, and calling you 'John' instead of 'Johnny'?"); and understand the core meaning (or gist) of the communication by distinguishing the important details from the unimportant ones. These are all capacities that many individuals with schizophrenia find difficult to master.

Second, there is abundant evidence that clients with schizophrenia have specific difficulties in their ability to accurately perceive emotions in others (Subocz, 2023), especially negative emotions such as anger and sadness (Bellack, Blanchard, & Mueser, 1996). This difficulty is thought to be the result of a specific neurological impairment, akin to receptive aphasia for language or agnosia that prevents the interpretation of visual images. Nevertheless, there

is evidence that emotion recognition ability in people with schizophrenia can be improved through training (Kurtz, Gagen, Rocha, Machado, & Penn, 2016; Roberts, Penn, & Combs, 2016).

Third, the combination of difficulties in detecting subtle social cues, recognizing others' emotions, and drawing inferences in social situations often results in a reduced ability to determine what other people may be thinking during an interaction (Deckler, Hodgins, Pinkham, Penn, & Harvey, 2018; Frith, 2004). Accurately perceiving or making educated guesses about another person's thoughts or motives is a crucial skill for successfully functioning in a wide range of social roles. For example, in close, intimate relationships, sensitivity to a partner's preferences, perspectives, and goals in different situations can contribute to a sense of mutual understanding and appreciation. Limited theory of mind skills can be reflected in other social difficulties, such as difficulty taking a hint (e.g., a family member facing a sink full of dishes and a messy kitchen after dinner says, "I sure could use some help around here!"). Difficulty knowing what other people are thinking can also lead people with schizophrenia to project their own fears or concerns onto others, such as believing that others are making fun of them (social anxiety) or mean them harm (paranoia).

Interactive Behaviors

Communication is a two-way street, and each person must do their part for a social interaction to be successful. While social perception skills involve the ability to understand or infer important information about the other person and the situation that may be rapidly changing over time, *interactive behaviors* refer to more basic skills required to engage the other person and sustain the interaction as long as needed. The three most critical behaviors include response latency, the use of social reinforcers, and turn taking.

Response latency is the amount of time it takes somebody to begin responding to what the other person just said. At the one extreme, someone may cut off other people by beginning to talk before they have even finished what they have to say, in which case the response latency is 0 seconds. While some degree of overlap when people are talking is common in ordinary conversation, when it becomes extreme and one speaker is never able to finish before the other interrupts, the conversation becomes frustrating to the dominated person. This is a relatively frequent occurrence during the manic episode of someone with bipolar disorder. The other extreme however, in which someone takes a longer time than usual to begin responding to the other person, is much more common in people with schizophrenia (Mueser, Bellack, Douglas, & Morrison, 1991) due to the slower rate at which they process information, including verbal speech. This longer than usual response latency can interfere with the natural ebb and flow of a conversation, making it seem to drag and feel unnatural and uncomfortable to the conversational partner.

The use of brief verbal responses to what another person is saying such as *uh-huh*, *I see*, and *right* combined with nonverbal behaviors such as nodding one's head is another group of interactive behaviors that plays a surprisingly important role in conversations. These brief social reinforcers when someone else is speaking let the person know that they are being heard, paid attention to, and that what they are saying is of interest to the listener. Such interactive behaviors serve as a social lubricant during interactions by maintaining the connection between two people when each one is talking.

The relative amount of time that each person spends talking is another interactive behavior that can influence the quality of an interaction. During typical conversations, there is often some degree of inequality in the amount of time each person talks, with one person talking more than the other. However, conversations begin to feel strained when the imbalance in amount of time talking between the two people becomes too extreme. If one person is talking so much that the other person can't get a word in edgewise, that person may begin to feel dominated in the conversation and think that what they have to say is not of interest to the other person. On the other hand, as is more often the case in people with schizophrenia, if one person has relatively little to say and for that reason the other person is doing most of the talking, the conversation can also feel awkward if the other person doing most of the talking feels they are doing all the work of keeping the conversation going. Some degree of equitable sharing of the amount of time each person spends talking is necessary to avoid one person feeling dominated by the other person or having the burden of holding up most of the conversation.

BEHAVIORAL REPERTOIRES

Social skills depend on the effective use of the constellation of specific elements discussed earlier, but they are not the simple sum of these molecular behaviors. Rather, the ability to communicate and interact effectively is the result of the smooth integration of these behaviors over time, along with ancillary characteristics such as grooming and hygiene. In essence, the whole is greater than the sum of the parts. Moreover, as discussed in the context of our definition of social skill, social behavior is situationally specific. Each situation presents special demands and constraints, and many situations have specific rules that must be mastered. For example, dealing with a high-pressure car salesman may require a false bravado and less candor than is desirable in most other situations. Similarly, being effective at "selling yourself" on a job interview and maximizing the chances of getting a job offer demand a style of behavior that would be very difficult to maintain in everyday interactions and would not be appropriate in informal interactions with peers. We refer to these discrete areas of skill as *behavioral repertoires*.

SST programs involve the teaching of behavioral repertoires related to social interactions, depending on the needs of the specific group of clients and the amount of time available. To guide the teaching of behavioral repertoires, curricula are needed to identify the specific social skills required for effective communication in the areas needed by the client, and the critical components of each skill. For example, the behavioral repertoire of assertiveness skills, which is the ability to stick up for yourself, express your feelings directly, and avoid being taken advantage of or coerced, can be broken down into eight specific skills: Refusing Requests, Making a Complaint, Responding to Complaints, Expressing Angry Feelings, Asking for Information, Letting Someone Know You Feel Unsafe, Asking for Help, and Responding to Unwanted Advice.

The critical skill components of each assertiveness skill can be further broken down into steps. For example, the skill of Refusing Requests can be broken down into the following three steps:

1. Look at the person. Speak firmly and calmly.
2. Tell the person you cannot do what they asked.
3. Give a reason if it seems necessary.

Part IV of this book provides an extensive set of curricula for SST addressing a broad range of behavioral repertoires: Four Basic Social Skills; Conversation Skills; Assertiveness Skills; Friendship and Dating; Dealing with Conflict; Dealing with Substance Use Situations; Education Skills; Work Skills; Technology-Based Communication; Living with Other People; Interacting with Health Care Professionals; and Solving Problems. Chapter 6 in Part II provides specific guidance on the selection of specific topic areas for SST based on the 12 curricula provided in Part IV, as well as how skills trainers can develop additional skills and repertoires for social situations not covered in those curricula.

Although social skills are situationally specific, some of the same skills are required across a broad range of different situations. For example, the ability to participate in a conversation is important to practically all areas of social functioning, ranging from enjoying time with family to making friends and intimate relationships to work or school to interacting with health care providers. Similarly, social perception skills, or understanding of what is socially appropriate in different situations, and being able to recognize socially relevant cues and accurately judge and respond to what another is thinking or feeling during an interaction, are important across all social situations.

Because of their broad applicability and high relevance to many or most social situations, conversational skills and social perception skills are overarching behavioral repertoires of social skills. For illustrative purposes, in the remaining two sections of this chapter, we highlight these two overarching behavioral repertoires that are often challenging for people with schizophrenia.

Conversational Skills

The ability to initiate, maintain, and terminate a conversation is central to almost every social interaction. Conversational skill is not simply the ability to engage in repartee at parties, but the basic medium of communication for interactions as simple as asking directions, ordering in a restaurant, and saying "thank you" for a simple favor. Conversational skills involve verbal and nonverbal responses employed in (1) starting conversations, (2) maintaining conversations, and (3) ending conversations.

A relatively circumscribed repertoire of specific verbal responses can be sufficient for starting and ending most conversations. Responses for initiation include (1) simple greetings, such as "Hi" and "Good morning"; (2) facilitating remarks and open-ended questions, such as "How are you today?," "I haven't seen you in a while, what's new?," "Isn't today a beautiful [miserable] day?," and "Did you listen to the ball game yesterday?"; and (3) remarks for entering ongoing conversations, such as "Mind if I join you?" and "Are you talking about the game [show, etc.] from last night?" Ending a conversation or leaving a group is frequently an awkward process, and clients with schizophrenia sometimes either leave abruptly or continue to talk after the conversation seems to have run its course. Concluding statements include "I have to go; see you later," "What time is it? I have to meet someone," and "It was nice talking with you. See you tomorrow." Of course, social perception skills (see the next section) are required to ensure that entry and exit are smooth and appropriately timed.

A somewhat more complex set of skills is required to maintain a conversation effectively and to promote satisfactory and reinforcing relationships. A basic requirement is the ability to ask appropriate questions that facilitate a response by the other person and/or secure relevant information. The socially skilled individual generally has two types of questioning strategies at their

disposal. In general conversations, open-ended questions often serve primarily to facilitate the conversation rather than obtain specific information. For example, when asking questions such as "How are you doing?," "What's new?," "What did you think of the game [show, meeting, etc.] yesterday?," and "Do you really think so?," the questioner is usually less interested in the specific answer than in the general conversation that follows. Specific information is more effectively secured by closed-ended questions, such as "What was the score of the game yesterday?," "What did you eat last night?," and "Would you like to go downstairs for lunch now?" The individual must also be able to differentiate these two types of questions when they are directed at them so as to make an appropriate response. Consider the following reply to the greeting "Hi, what have you been doing?": "Well, I bought a cup of coffee this morning, then I went to my group at the center, then I had a hamburger for lunch, and I just went to the bathroom." Although this response might ordinarily be ascribed to "concrete thinking" in schizophrenia, it could more usefully viewed as due to an impairment in social skills.

Another factor that is critical for maintaining interactions is periodic reinforcement of the interpersonal partner, as briefly alluded to. Brief interactions can be effectively enacted with an exchange of greetings and/or information, but these minimal responses are not sufficient to maintain longer interactions or to facilitate the development of continuing relationships. Conversational reinforcers include statements of agreement (e.g., "Yeah, you're right," "I agree with you"), and approval ("That's a good idea," "I never thought of that, you're right"). Simple verbal facilitators such as "Yeah," "Uh-huh," and "Mm-hmm" have also been shown to have significant reinforcing value. The quality of social interactions is also improved by the appropriate use of social amenities such as "Please," "Thank you," and "Excuse me." Clinicians are often aware of both the relative infrequency with which many clients with schizophrenia use either social reinforcement of social amenities or the less responsive nature of their conversational style.

There are several nonverbal response elements that substantially contribute to socially skillful behavior:

1. Eye contact should be maintained intermittently, interspersed by gazing in the direction of the partner. Both the absence of eye contact and constant eye contact (i.e., staring) are generally inappropriate.
2. Voice volume should approximate a "conversational" level, neither too loud nor too low.
3. Voice tone should not be monotonic, but should include inflection to communicate emphasis, affect, and so on.
4. Response latency to input from the interpersonal partner should generally be brief (see also the discussion of timing in the next section). Mediators such as "Let me think about that" and "Hmm" can be employed when a response must be contemplated.
5. Speech rate should coincide with normative conversational style.
6. Speech should be as fluid as possible.
7. Physical gestures such as head nods, hand movements (for emphasis), and forward leaning all add to the qualitative impact of the communication.
8. Smiles, frowns, and other facial gestures should be employed in conjunction with verbal content.
9. Physical distance should be maintained according to preferred social norms.
10. Posture should be relaxed, rather than stiff.

These response elements undoubtedly have differential importance in different situations. At present, there are no clear data on their comparative contributions to social effectiveness or on the relative importance of the nonverbal and verbal response components. However, it seems likely that they combine to create a gestalt impression and that anomalous performance of any of the nonverbal elements (e.g., staring or extremely low voice volume) would have deleterious effects on social interactions.

Social Perception Skills

Good conversational behavior also requires effective social perception skills. The most relevant social perception skills fall into five general categories: (1) listening, (2) getting clarification, (3) relevance, (4) timing, and (5) identifying emotions.

Listening or attending to the interpersonal partner is the most fundamental requirement for accurate social perception. Many clients with schizophrenia are less effective in social situations precisely because their focus of attention is primarily internal and only intermittently and selectively directed outward. Consequently, they often fail to secure sufficient accurate information to make an appropriate response, and they may use few or no social facilitators or reinforcers when conversing with others.

Even if the individual is an adept listener, they will periodically tune out for brief periods and/or occasionally be confused or uncertain about the message being communicated. The skillful individual can identify this confusion and will seek *clarification*. Failure either to perceive confusion or to resolve it frequently results in a breakdown of the subsequent communication process and the use of inappropriate responses. Clarification can be secured with such statements as "Excuse me, but I didn't hear that," "I don't understand, and I'm not sure what you mean (what you're asking, etc.)." A related and somewhat more subtle skill is perception of confusion on the part of the interpersonal partner. Confusion is often communicated by quizzical or vacant looks, which may include cocking the head to the side, furrowing of forehead and eyebrows, contraction of the pupils, and cessation of social reinforcers (e.g., head nods and "mm-hmms"). By perceiving the partner's confusion, the skillful individual can avoid ineffective communication such as rambling.

To be appropriate, a response must be *relevant* to the conversation as a whole, as well as to the immediately preceding communication. Persons with schizophrenia sometimes have difficulty with this and may veer off the conversation topic and make seemingly irrelevant references to topics such as personal problems or personal interests. Determining relevance is primarily a function of listening to and analysis of the communications. However, relevance can also be increased by self-censoring, such that certain content areas or discrete responses are not made in certain types of interactions (or conversely, are allowed only in certain interactions). For example, complaints about ill health, references to idiosyncratic experiences (e.g., hallucinations), and discussion of toileting and sexual behavior are customarily inappropriate other than in conversations with health service providers, family, and close friends.

Timing involves performance of responses at appropriate points in an interaction, as well as with appropriate latency, as already described. Effective social interaction involves ebb and flow, including both rapid exchanges and silences. Certain activities and emotional states also affect social appropriateness. For example, when talking with someone who is grieving the loss of a

loved one, it is normal and socially appropriate to talk in a quieter tone of voice, more slowly, and to allow greater time for pauses between responding to the other person than in other situations.

The content of the conversation and social norms are the primary determinants of appropriate timing, and thus knowledge of social rules is essential for proper timing. Poor timing is exemplified by interruptions, long latencies to simple closed-ended questions, or leaving an interaction before some resolution is reached (e.g., ignoring requests for delay, such as "Let me finish this first" or "Let me think about that").

The final aspect of social perception involves accurate *perception of emotion*. Emotion is frequently communicated by a subtle combination of verbal and nonverbal cues since many people are not sufficiently assertive to communicate their emotions with clear, direct statements. Given that the emotional status of the interpersonal partner is a critical factor in determining an appropriate response, the socially skilled individual must be able to read emotional cues. At a minimum, this entails perceiving changes in the nature of the partner's behavior; however, discrimination of emotional states is also necessary. In addition, the skillful individual is able to identify their own emotional states, transmit them accurately, and analyze their cause. Such personal perception and analysis enhance accurate communication and are necessary for effective resolution of conflict and distress.

SUMMARY

This chapter has provided an introduction and overview of the social skills model. We defined social skills and gave a detailed description of the elements of social behavior. Expressive skills include verbal behavior, paralinguistic behavior, and nonverbal behavior. Receptive skills, referred to as social perception or social cognition, refer to the ability to attend to and interpret the cues provided by an interpersonal partner. We also discussed factors that interfere with appropriate social behavior and prevent clients from using skills in their repertoires, including significantly slower information-processing speed, positive and negative symptoms, affect, and environmental constraints. Finally, we described two overarching behavioral repertoires that are important to effective social performance across the broad range of social situations: conversational and social perception skills. This material was designed to provide an orientation to the rest of the book, which discusses the assessment and rehabilitation of impaired social skills. As the reader will see, the basic building blocks to effective performance introduced here are referred to in every subsequent chapter in the volume.

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