

1. INTRODUCTION

Humans are social beings. We live together, we work together, and we play together with others in our families or other social groups. This means that we have social contact with others, both familiar and unfamiliar, on a daily basis. These social interactions most typically involve both verbal and nonverbal forms of communication (Englund, 1997). Moreover, success in or quality of social interaction is often central to a person's level of participation in the many activities in which he/she engages each day (Beresford, Tozer, Rabiee, & Sloper, 2007). Social participation also is a significant predictor of quality of life (Dijkers, Whiteneck, & El-Jaroudi, 2000; Simmons, 2005).

When a person is able to interact socially with others in a manner that is (a) effective and (b) consistent with norms and/or cultural or societal conventions, that person can be considered to be socially competent (Hargie, 2006). While we are all born in cultures or social systems that are filled with norms and conventions that we gradually internalize as we grow up, we commonly take them for granted as adults, and expect others to have the same social competence. In fact, it is when someone "breaks a rule" that we become aware that the rule even exists. Moreover, it is such breaking of the rules of expected social conventions that leads to the identification and stigmatization of person with psychiatric, developmental, or other disabilities (Englund, 1997).

The role of the occupational therapist is to support and enable a person's engagement in occupation within one's home and community (American Occupational Therapy Association [AOTA], 2008; Baum, 2003). Areas of occupation include work, school, leisure/play, and personal and instrumental activities of daily living (ADL). Social interaction is required for, and is observable during, engagement in all areas of occupation. In work environments, people frequently interact with co-workers to give instructions, seek information, make decisions, collaborate, and engage in informal social conversations or "small talk." Interactions with similar purposes also support a person's engagement in, and enjoyment of, leisure activities. Likewise, a child playing with a friend may seek out instructions, problem solve, collaborate, and engage in informal social conversations. While many people complete personal ADLs alone, someone who needs assistance from a personal care attendant, or support from a partner or family member, must give information to, problem solve with, and

have informal social conversations with those who provide assistance or support. Finally, nearly all instrumental ADLs (e.g., preparing a meal, shopping) may include social interactions with any number of intended purposes (e.g., decision making, collaborating, informal “small talk”). One’s success in social interaction and/or social competence, therefore, is often central to success in the performance of tasks that comprise each area of occupation.

Currently available assessments of social interaction often rely on the use of checklists related to how well a person interacts with others, and most often are reported from another person’s perspective (e.g., parent, teacher) (Farmer & Oliver, 2005). Typically, such checklists focus on components of social interaction, for example, understandable speech, syntax, and stereotypic conversation. Using observation to assess social interaction is another common approach (Göncü & Weber, 2000; Kontos & Keyes, 1999; Kontos & Wilcox-Herzog, 1997), but the typical focus is based on observation of underlying body functions such as eye-gaze (Cruice, Worrall, & Hickson, 2005; Turkstra, 2005).

Current methods used to evaluate social interaction are commonly based on:

- **Checklists**
- **Self- or proxy-report**
- **Role play or other contrived methods**
- **Evaluation of isolated components of social interaction**
- **Evaluation of underlying body functions**

Hargie (2006) advocated for assessing social interaction skill both in the context of engagement in “real” social interactions, and as a whole rather than evaluating only isolated actions or components. Lord et al. (2005) identified the need for assessments that “can be used across activities, interaction styles, and task demands” (p. 701) and are responsive to change in performance. The *Assessment of Motor and Process Skills* (Fisher, 2006a, 2006b) and the *School Version of the Assessment of Motor and Process Skills* (Fisher, Bryze, Hume, & Griswold, 2005) provided models for the development of an *unique tool designed to assess social interaction skills in natural, ecologically-*

relevant settings, during performance of needed, desired, and meaningful tasks (i.e., occupation) that involve social interaction, and at the same time, taking into account variations in rater severity and level of challenge of different intended purposes of social interactions.

Assessing a person's quality of social interaction in the context of engagement in occupation differentiates an occupational therapist's assessment from that of other professionals. That is, evaluating a person's quality of social interaction by rating a set of items that represent discrete social interaction skills, the smallest observable units of social interaction, as they unfold during an ongoing occupational performance, reflects our unique perspective on "doing" (Fisher, 1998). Such a view is consistent with Cavell (1990), who proposed that social interaction skill be assessed in situations that are relevant and problematic for a person, and not through the assessment of isolated components of social interaction, underlying body functions or person factors, or via self- or proxy-report. These latter approaches, especially those involving the evaluation of underlying body functions, require that the professional hypothetically propose a relationship between the person's test scores and his/her social competence during performance of daily life tasks that are desired or required for full participation in society.

1.1 Purpose and Overview of the Evaluation of Social Interaction

The *Evaluation of Social Interaction* (ESI) was designed to assess a person's quality of social interaction as he/she engages in "real" interactions, with client-specified intended purposes, and with social partners with whom the person would typically need or want to interact. The ESI begins with an interview with the client to identify the types of social interactions in which the person needs or wants to engage, but about which there are concerns. The evaluation continues as the occupational therapist observes and later scores 27 different social interaction skills (ESI items) as they are enacted in the context of at least two needed or desired occupational performances involving social interaction, in natural environments, with the social partners with whom the person needs or wants to interact, and with purposes determined by the client. As it is important to understand the impact of the social partner's familiarity and status, as well as his/her overall quality of social interaction, and the influence they

have on a person's social interaction (Hargie, 2006), these are also rated. Scoring of the ESI is criterion-referenced, where the criterion is competent social interaction (i.e., social interaction that is socially appropriate, mature, polite, respectful, and timely), given the intended purpose and context of each social interaction. The standardization procedures for the ESI enable the results to be used to identify a person's strengths and limitations in social interaction, plan intervention to support needed social interaction, and monitor change over time.

The purpose of the *Evaluation of Social Interaction* is to provide a standardized measure of a person's quality of social interaction, as observed in a natural context, in order to (a) establish a person's baseline level of performance, (b) plan occupational therapy services, and (c) measure progress or change over time, including the effectiveness of occupational therapy services.

1.2 Definition of Terms

In this section, we will define a number of terms, as we use them in the ESI manual. Our intent is to enhance clarity and avoid confusion. Among the terms we will define are *client* and various terms related to social interaction.

1.2.1 Defining who is the client

In the ESI manual, we will use three different terms to refer to the "client." This is deliberate. We will use the term *person* to refer specifically to the person who has been referred for occupational therapy services (e.g., patient, customer/consumer, student). Moreover, because the ESI may be used to evaluate well persons and/or other persons in the client constellation who have not been referred for occupational therapy services, we will also use the term *person* to refer to the person who is to be evaluated using the ESI.

We will use the term ***client constellation*** to refer to both the person and others who live with, work with, or are otherwise closely connected to the person who has been referred to occupational therapy. Examples include (a) a patient and close family members (typically those who live with that person), (b) a customer/consumer who is attending a day treatment center and the staff who are working with that person on a regular basis, or (c) a student in an elementary classroom and his/her teacher. The other persons included in the client constellation are those who experience problems of occupational performance in relation to working or interacting with the person referred to occupational therapy.

We will use the term ***client group*** to refer to a group of persons who share similar occupational performance problems, but who otherwise are not related, nor have a close relationship with each other. Examples of client groups include (a) the ward personnel who are responsible for caring for a patient, (b) a group of customers/consumers who participate in a group intervention program at a day treatment center, or (c) a group of students who all receive occupational therapy services together within a classroom setting (Fisher & Nyman, 2007). In most cases, the ESI is administered with the purpose of evaluating either a person referred for occupational therapy services or a particular member of a client constellation who may be influencing the person's quality of social interaction.

Clients are persons in need of occupational therapy services. A *client*, therefore, may be:

- **A *person* who has been referred for occupational therapy services and/or the person to be evaluated using the ESI**
- **A *client constellation* — the person who has been referred to occupational therapy and those persons who are closely connected to that person, *provided they also experience problems of occupational performance in relation to working or interacting with him/her***
- **A *client group* — a group of persons who share similar occupational performance problems, but who otherwise do not have a close relationship with one another**

Finally, we use the term *client* when we refer to (a) the person who was referred to occupational therapy, (b) the client constellation, and/or (c) a client group. For example, we have referred to the client interview. By doing so, our intent is to clarify that the interview may be with the person, the client constellation, and/or a client group. That is, it is always ideal to interview the person who has been referred to occupational therapy in order to determine what he/she considers to be his/her primary occupational performance concerns. In some cases, it may be a group of persons who were referred, each of whom has his/her own unique concerns. Moreover, it may also be the case that the person referred to occupational therapy is, for some reason, unable to communicate concerns clearly, accurately, or at all. For example, students in elementary school classrooms sometimes are not aware that they may be experiencing problems in the classroom or they cannot articulate clearly what their problems are if they are aware that they are having difficulties. In other cases, a student may be able to identify what school-related tasks or academic subjects are presenting problems, and it is imperative that his/her perspective be acknowledged. It is, however, commonly the teacher who initiates referral of a student to occupational therapy because of concerns about the student's behavior or quality of performance. Therefore, it is also critical that the teacher also be included as a member of the student's client constellation.

1.2.2 Defining terms related to social interaction

The following provide definitions for terms that we will use throughout the ESI manual:

- ***Social interaction*** — a back and forth, “give and take” exchange of verbal and nonverbal messages between two or more people. More specifically, a social interaction is comprised of a series of actions, units of verbal or nonverbal social behavior, that are (or should be) focused toward a common intended purpose. Social interactions most commonly occur within the context of performance of daily life tasks (i.e., occupation) which may or may not have as their primary purpose the opportunity to engage in social interaction.
- ***Social interaction skills*** — the *individual actions or units of social behavior* that are observable within the ongoing stream of occupation that involves social interaction (i.e., a social exchange). More specifically, when we consider

occupation that involves social interaction, the social interaction skills are the *smallest observable units of social behavior* that are linked together one by one as the person constructs the social exchange (Fisher, 2009) (see Figure 1–1). A person may exhibit more or less social interaction skill; diminished skill is characterized by “performance errors” that reflect decreased social appropriateness or effectiveness of the behavior — diminished quality of performance of an individual link in the chain of actions.

Social interaction: A chain of small actions — 27 social interaction skills

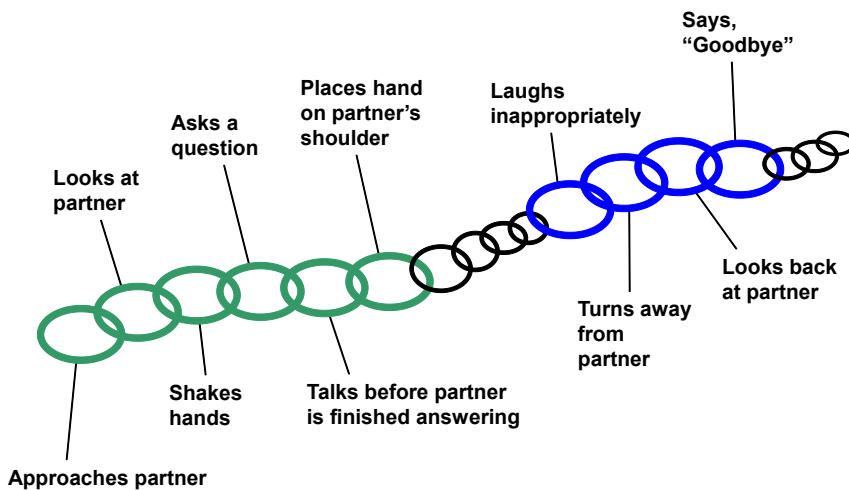


Figure 1–1. Social interaction skills: Smallest observable units of social interaction — links in a chain of actions performed one-by-one as the person “constructs” the social exchange.

- *Occupation or meaningful activity (i.e., task performance)* — performing a daily life task with an intended expectation, purpose, or goal. Examples of occupation include eating a meal, buying tickets to the theater, and planning a party. Not all meaningful activities have social interaction components. For example, to take a shower is a task one most often performs alone. Other task

performances are innately social in nature. For example, planning a party is a task performance that is comprised primarily of social interaction skills. In contrast, while eating a meal is comprised primarily of many actions that are not innately social (e.g., cutting meat, drinking from a glass of wine), eating a meal with friends includes an expectation that the persons who eat together will also engage in social interactions.

- ***Intended purpose of a social interaction*** — the desired goal of engaging in a social interaction, as identified by the person who is engaging in the social exchange. The intended purpose of a social interaction is not always to be equated with the goal or purpose of a task performance. For example, a group of persons may be engaged in informal conversation as they drink coffee together during a break at work. The task is to drink coffee. The reasons the various people are drinking coffee may include “to stay awake,” to enjoy the taste of coffee, or to get warm, but these are not purposes of the social interactions that occur while they drink coffee together. The purposes of such informal conversations commonly will vary among the persons involved, but may include to catch up on the “office gossip” or to enjoy being with friends and co-workers. Obviously, the reasons people perform tasks vary among different persons and for the same person over time. Nevertheless, the most common goal of social interaction that occurs while people drink coffee together is to engage in informal conversation or “small talk.”
- ***Overall quality of social interaction*** — an *overall* assessment of how competently the person interacted with his/her social partners during a social exchange.
- ***ESI quality of social interaction measure*** — a linearized total test score that reflects a person’s estimated position along a continuum of quality of social interaction — the ESI scale. The quality of social interaction measure (ESI measure) is estimated based on the person’s raw scores for each of the 27 social interaction skills for each of the social exchanges that were observed and scored. Thus, if a person was observed during two social exchanges, the person’s ESI measure will be based on 54 raw ESI item scores, 27 for each social exchange.

1.3 Unique Features of the ESI

The ESI provides a unique perspective for occupational therapists who want to measure a person's quality of social interaction during activities that are desired by the person, and that support the person's engagement in occupation and desired level of participation in society. The ESI, therefore, has several unique features:

- ESI is a *client-centered* assessment tool. Based on an occupational therapy interview with the client, the client determines the types of social interactions that the occupational therapist will observe.
- The observed social interactions must occur within the *naturalistic* context of performing meaningful and relevant daily life tasks that involve social interactions with others; the occupational therapist does not ask the person to role-play or pretend to engage in an interaction.
- The ESI can be used to *evaluate the quality of virtually any relevant social exchange*. This means that the ESI can be administered in virtually any setting, and the person can be observed interacting with virtually any number of social partners who may vary in age and/or overall quality of social interaction.
- The social interactions are performed and *evaluated in accordance with cultural expectations*. Therefore, the occupational therapist must consider the culture in which the person is living¹ and where the observation occurs. This allows the ESI to be both culture-specific, yet free from cross-cultural bias.
- The ESI can be used with children, *2 years of age and older*, and adults of any age, provided the person makes an attempt to communicate and expresses spoken or signed words.

¹ The culture in which the person is living is based on a combined consideration of local societal norms as well as the cultural background of the participants in the social interaction. For example, if a person from one country moves to another country, and is observed interacting with persons from the new country, the person is evaluated based on the cultural expectations of the new country. If, in contrast, that person is observed at home interacting with his or her family members who also come from the same country, it may be appropriate to also take into consideration the shared cultural expectations of the social partners that originated from their country of origin, provided they are not in conflict with local rules and regulations.

- The ESI can be used to evaluate children and adults who are *well or typically-developing, or with identified disabilities* that may be impacting their quality of social interaction.
- The *many-faceted Rasch measurement model* (Bond & Fox, 2007; Fisher, 1993, 1994; Linacre, 1993, 2009a, 2010b) used to develop the ESI and to analyze the person's raw item scores allows the occupational therapist to measure the person's quality of social interaction while taking into account (a) the relative challenge of the intended purpose of the social interaction, (b) the relative difficulty of the ESI items, and (c) the relative severity of the occupational therapist (ESI rater) who observed and scored the person's performance.
- The ESI is a *sensitive tool* that enables occupational therapists to identify the need for service, plan effective interventions, and document effectiveness of occupational therapy interventions designed to support social interaction.
- The *ESI computer-scoring software can be used to generate ESI Results reports*. These reports include linear measures that can be used to document a person's quality of social interaction from a *criterion-referenced and a norm-referenced perspective*.

1.4 Limitations of the ESI

While there are many advantages to using the ESI, there also are some limitations. First, the ESI is not suitable for evaluation of (a) children under 2 years of age, or (b) persons who make no attempt to communicate and do not express spoken or signed words. Second, the ESI is not intended to be used to evaluate the person-related or environmental factors that may be contributing to diminished quality of social interaction.

The ESI is not appropriate for use with

- **Children under 2 years of age**
- **Persons who do not attempt to communicate**
- **Persons who do not produce spoken or signed words**