Enhancing Occupational Performance Through an Understanding of Perceived Self-Efficacy

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The construct of perceived self-efficacy, proposed to explain the discrepancy between skill and actual performance, has received widespread attention in the psychological and medical literature. This paper describes the construct in detail, including the difference between self-esteem and perceived self-efficacy, and proposes a goodness of fit with occupational therapy practice.

It is postulated that attention to the assessment and monitoring of perceived self-efficacy, along with the use of activities that closely approximate the actual activities to be performed in the community, will result in improved occupational performance and thus, better occupational therapy outcomes. Occupational therapists are challenged to identify and incorporate this construct into their day-to-day clinical programs to enhance treatment outcomes.

Perceived Self-Efficacy

Origins of Perceived Self-Efficacy

Perceived self-efficacy is a concept originally developed as part of Social Cognitive Theory. Social cognitive theorists view human functioning as the result of triadic reciprocity: "behavior, cognitive and other personal factors, and environmental events all act as interacting determinants of each other" (Bandura, 1986, p. 18). The relative influence of each of these three factors varies from situation to situation, from person to person, and from environment to environment. Within the framework of Social Cognitive
Theory, people are attributed with six basic capacities.

1. Symbolizing capacity—the ability to use symbols to transform experiences into models that guide future actions, which in turn are guided by thoughts; thoughts are sometimes inaccurate due to misinterpretation of the incoming information.

2. Forethought capacity—the ability to anticipate the potential outcome of future actions, set goals, and develop action plans.

3. Vicarious capacity—the ability to learn through observation of others and thereby abbreviate the learning period; this ability is vital to survival.

4. Self-regulatory capacity—the ability to make choices based on personal beliefs, rather than on the expectations of the external environment. Internalized standards are used to guide behavioral choices.

5. Change capacity (Plasticity) — the ability to develop or change. The vast potential for human development is shaped by both direct and vicarious experiences into many forms, constrained only by biological limitations.

6. Self-reflective capacity—the ability to think about personal experiences and derive generic knowledge about oneself and the world in which one lives. One of the most powerful types of self-reflective thought is perceived self-efficacy (Bandura, 1986).

Each of these six capacities influences the degree of self-efficacy expressed for each task by any given person.

**Definition of Perceived Self-Efficacy**

The concept of perceived self-efficacy (or efficacy expectations) evolved primarily from the observation that traditional cognitive psychology models did not adequately explain the discrepancy between attained skills and the quality of performance output (Bandura, 1977). Traditional models attempted to explain the discrepancy between skills and performance as a function of the actors' expectation of outcomes or “action-outcome expectancy.” Action-outcome expectancy theorists postulate that, given equivalent skills, performance differences are due to differences in the actor's belief that the response will lead to a desired goal. If this belief is strong, the actor will engage in the requisite behavior; if this belief is weak, the actor will not engage in the behavior even though he or she possesses the skill to do so.

Bandura (1977) suggested that a difference in outcome expectancy does not explain the total variance between skill and performance. He suggested that perceived self-efficacy is also a significant factor. Bandura (1986) defined perceived self-efficacy as

... people’s judgments of their capabilities to organize and execute courses of action required to attain designated types of performances. It is concerned not with the skills one has but with the judgments of what one can do with whatever skills one possesses (p. 391).

Thus, Bandura (1977) asserted that one’s belief in one’s ability to use a specific skill partially explains why people of equivalent skill achieve at differing levels. This belief in one’s ability to perform (i.e., perceived self-efficacy), develops as a result of the interaction of each of the six attributes of Social Cognitive Theory described earlier.

**Relationship to Self-Esteem**

Perceived self-efficacy should not be confused with the construct of self-esteem. *Self-esteem* is defined as “the dimension of self-concept that includes a negative and/or positive sense of self” (Daub, 1988, p. 57). Self-esteem is created by the person’s analysis of his or her overall competency at factors that he or she considers to be socially relevant (Mayberry, 1990). Thus, a person may perceive himself or herself to be competent at many things but have low self-esteem due to a belief that these competencies are not socially relevant. Conversely, a person may express a low degree of perceived self-efficacy for one or more tasks yet have high self-esteem. Self-esteem and perceived self-efficacy should be highly correlated only when measuring perceived self-efficacy for a task that is highly socially relevant to the subject. A Nobel Prize winner may have high self-esteem in part due to the recognition of the value of his or her contribution to society. The same Nobel Prize winner may have low perceived self-efficacy for playing racquetball or gourmet cooking. However, his or her perceived self-efficacy for the activity that resulted in the Nobel Prize should be high and should correlate strongly with a measure of his or her self-esteem. Thus, perceived self-efficacy may contribute to a sense of self-esteem, but it is an independent construct.

**Parameters of Self-Efficacy**

Bandura (1977) identified three parameters of perceived self-efficacy: magnitude, strength, and generality. **Magnitude** refers to the relative level of difficulty of the task that is being rated. For example, Ewart and colleagues (1986) used different jogging distances to reflect differences in the magnitude of perceived self-efficacy for a group of subjects with postmyocardial infarction. Subjects who were completely confident that they could jog 1 mile were considered to have a greater magnitude of perceived self-efficacy than those who were completely confident that they could jog only a quarter of a mile and somewhat confident that they could jog 1 mile.

**Strength** of perceived self-efficacy refers to the degree to which people believe they can succeed at a given level of an activity; this degree can vary from total certainty to total uncertainty. The stronger the sense of efficacy, the more likely people are to persevere in the face of...
adversity and the less likely it is that failure will extinguish their efficacy expectations (Bandura, 1977).

Generality of perceived self-efficacy refers to the degree to which the person's perceived self-efficacy for one activity transfers to other similar or different activities. Successful performance of some tasks results in a strengthening of efficacy expectations for that task alone, whereas success at other tasks generalizes to tasks that are different from the original task (Bandura, 1977). Bandura does not identify the types of tasks that generalize or those that do not.

History of the Construct

Bandura postulated that, given the requisite skills and belief that the response will lead to a desired outcome, perceived self-efficacy would be an important determinant of successful performance. Bandura (1977; Bandura & Adams, 1977) tested the theory about perceived self-efficacy with an unspecified number of persons with snake phobias. Subjects were asked to state whether they were able to perform each of 18 tasks and to rate the strength of their expectations that they would succeed on a 100-point scale with 10-point intervals. The subjects were randomly assigned to one of three groups: vicarious experience, modeling (later called enactive experience), or no treatment. The subjects in the vicarious learning group observed an instructor handling snakes, while the enactive learning group first observed and then attempted the snake-handling techniques themselves. Of the subjects who achieved maximal performances during therapy (successfully achieved the snake-handling techniques), Bandura noted that not all expressed maximal efficacy expectations. Efficacy expectation and performance during the treatment sessions were examined as possible predictors of subsequent performance. Perceived self-efficacy was found to be the best predictor of subsequent performance. The higher the subjects' perceived self-efficacy at the completion of treatment, the better their performance when retested at a later date ($r = .75, p < .01$). This relationship existed regardless of whether the efficacy expectations were derived through vicarious or enactive experience. However, subjects who experienced enactive education produced higher, more generalized, and stronger efficacy expectations and increased performance attempts. Bandura (1977) stated that

on the one hand, the mechanisms by which human behavior is acquired and regulated are increasingly formulated in terms of cognitive processes. On the other hand, it is the performance based procedures that are proving to be most powerful for effecting psychological changes. As a consequence, successful performance is replacing symbolically based experiences as the principal vehicle of change (p. 191).

Since his initial work, Bandura has examined the effect of perceived self-efficacy with a variety of subjects and found that perceived self-efficacy is a consistent predictor of performance (Bandura, 1982; Bandura, Gioffi, Taylor, & Brouillard, 1988; Bandura & Wood, 1989).

The construct of perceived self-efficacy has been applied in a variety of different clinical, educational, and organizational situations by many other authors. From January 1987 to December 1992, 933 articles referring to perceived self-efficacy have been printed in journals indexed by Psychlit alone. The following is a brief summary of the findings of a small sampling of these articles that were selected for their relevance to occupational therapy practice.

Clinical examples.

- Perceived self-efficacy for exercise was found to be correlated with an increase in exercise endurance in a sample of subjects ($n = 119$) with chronic obstructive lung disease (Toshima et al., 1990)
- Self-efficacy was found to explain 24% of the variance in adjustment to multiple sclerosis ($n = 62$) (Wassem, 1992)
- Self-efficacy for jogging proved superior to treadmill performance, depression, and type A personality in predicting adherence to exercise prescription in a sample ($n = 40$) of patients with coronary artery disease (Ewart et al., 1986)
- The results of a study of subjects ($n = 30$) diagnosed with arthritis indicated that a higher level of perceived self-efficacy for pain control after a cognitive behavioral education program was related to a lower level of perceived pain (O’Leary, Shoor, Lorig, & Holman, 1988)

Health promotion examples.

- A scale, developed to measure perceived barriers to health-promotion activities, was found to be highly correlated ($- .48$) with perceived self-efficacy (Stuifbergen, Becker, & Sands, 1990)
- In a sample ($n = 600$) of subjects participating in the Stanford Heart Disease Prevention Program, self-efficacy was found to be a better predictor of nutritional choices than demographic factors, social influences, and health knowledge (Slater, 1989). This study also found that cognitive control (the capacity to exercise control over one’s own thinking and motivation) predicted the level of perceived self-efficacy
- Raising self-efficacy for health-promoting behaviors was found to be more effective than emphasizing the risk of not performing the health-promoting behavior in two separate studies (Seydel et al., 1990)

Education examples.

- Attributional feedback from the researcher (feed-
A strong sense of perceived self-efficacy for an activity is crucial to successful performance because "it determines which activities people engage in, the amount of effort they expend before terminating the activity, and how long they will persevere in the face of adversity" (Bandura, 1981, p. 215). People are faced with frequent activity choices throughout their lives. The strength of their efficacy expectations for an activity affects whether they choose to engage in the activity or not. Strong efficacy expectations result in engagement in an activity, whereas weak efficacy expectations result in avoidance (Bandura, 1986). This process of activity selection has a profound effect on human development, in that activity choices enlarge or restrict one's opportunities to develop new skills, or to enhance existing ones (Bandura, 1989).

Errors in judgment regarding one's performance, whether too optimistic or too pessimistic, may result in significant consequences (Bandura, 1986). In activities with a small margin of error (e.g., driving a car), overly optimistic efficacy expectations may prove disastrous. However, in activities with a greater margin of error, activities that are unlikely to result in harm to oneself or others, appraisals of performance that exceed actual ability are quite functional (Bandura, 1989).

For example, when a patient is attempting to learn to maneuver a wheelchair, a high expectation that he or she is capable of learning to propel the chair will result in more frequent attempts and learning will advance more quickly. On the other hand, if the patient believes that he or she is unlikely to master propelling the wheelchair, he or she will avoid situations where this is a requirement and progress will be impeded. Bandura asserted (1989) that people must strive to exceed past performances, and that if efficacy expectations never exceeded past performances, the acquisition of new skills would not occur.

People with strong efficacy expectations will persevere in the face of adversity, due to a belief that they will ultimately succeed (Bandura, 1977). People with weaker efficacy expectations will quit when faced with obstacles, or refuse even to try. People who view themselves as efficacious are more likely to expect things to go right (Bandura, 1989). They approach difficult tasks as challenges to master rather than threats to avoid. People who experience success react by raising their personal goals and being more committed to the activity (Bandura & Wood, 1989). The stronger the sense of perceived self-efficacy, the higher the goals set and the stronger the commitment to attainment of the goals.

Although perceived self-efficacy is a crucial behavioral determinant, Bandura (1977) pointed out that perceived self-efficacy in the absence of skill, or a desire to perform, will not ensure successful performance. Attempts to enhance performance must be accompanied by an understanding of the influence of perceived self-efficacy on performance.

**Perceived Self-Efficacy as a Behavioral Determinant**

Perceived self-efficacy refers to a belief in one's ability to perform a certain task or behavior. It should not be confused with a belief that performance of a specified behavior will result in a specific outcome (Bandura, 1977). Rogers (1983) referred to a belief that performance of a specified behavior will result in a specified outcome as response efficacy. Both perceived self-efficacy and response efficacy affect whether or not the person will elect to perform a certain task; however, they are distinct behavioral determinants (Bandura, 1977). That is, one must believe both that a specific action will lead to a desired goal and that one is capable of performing the specific action, or one will not act.

Bandura (1986) argued that theories that emphasize outcome expectations are based on animal research where measurement of perceived self-efficacy was impossible. He stated that "convictions that outcomes are determined by one's own actions can be either demoralizing or heartening, depending on the level of self-judged efficacy" (Bandura, 1986, p. 413). Therefore an expectation that a certain behavior will result in a certain outcome is not sufficient to ensure successful performance unless one believes one has the skills to succeed at the required task.

**Outcome Expectations and Perceived Self-Efficacy**

According to self-efficacy ideology, people can give up trying and become hopeless in two different ways: they may believe that their continued attempts will not bring positive results (response efficacy), or they may believe that they are unable to perform the tasks necessary to bring about the desired results (perceived self-efficacy) (Bandura, 1982). Different combinations of these two factors result in different self-assessments:

- If persons have a strong sense of perceived self-efficacy and a strong belief in the efficacy of the
Perceived self-efficacy was measured by asking a group of retired university faculty members how well they handled or could in the future handle each of the items on a list of daily hassles (self-efficacy scale) and a list of negative life events (self-efficacy/life events scale). The results indicated that higher levels of perceived self-efficacy were associated with lower levels of depression for both sexes. Additionally, higher levels of perceived self-efficacy were associated with lower levels of psychological distress for women and fewer psychosomatic complaints for men. Overall, the results indicate a significant association between perceived self-efficacy and psychological adjustment.

Perceived self-efficacy has also been shown to negatively correlate with depression. Davis-Berman (1996) administered the Physical Self-Efficacy Scale and the General Self-Efficacy Scale to a sample of 200 elderly residents of a retirement center. The Physical Self-Efficacy Scale consists of 22 items and includes questions about reflexes, muscle tone, and sports ability. The General Self-Efficacy Scale consists of two subscales, the General Scale and the Social Self-Efficacy Scale. The scale contains questions about one's general belief in one's ability to do things and one's ability to handle oneself in social situations. All three Self-Efficacy Scales were found to be inversely and significantly ($p > .01$) correlated to depression. (General Self-Efficacy $r = -.40$, Social Self-Efficacy $r = -.23$, and Physical Self-Efficacy $r = -.50$. ) That is, persons with lower self-efficacy scores were more likely to be depressed.

Influencing the Strength of Perceived Self-Efficacy

Perceived self-efficacy is influenced through an ongoing evaluation of success and failure with each task people participate in over the course of their lives (Bandura, 1986). Bandura (1982) stated that perceived self-efficacy develops through successful experiences that create higher efficacy expectations and failure experiences that lower efficacy expectations. Thus, the development of perceived self-efficacy is a dynamic process.

Perceived self-efficacy is constantly affected by four sources of information: personal performance accomplishments, vicarious experience (watching others of similar skill perform a task), verbal persuasion, and the person's physiological state (Bandura, 1977).

Personal performance accomplishments. Personal performance accomplishments, also called enactive experiences, are the most influential source of information about one's perceived self-efficacy (Bandura, 1986). Success, as perceived by the person, enhances perceived self-efficacy and failure decreases it. Failure early in the development of a new skill is more likely to decrease perceived self-efficacy than failure after a firmly entrenched belief in the skill has been developed. When people believe they are efficacious, they attribute failure to the circumstances, poor effort on their part, or the use of poor strategies (Bandura, 1986).

Vicarious experience. A great deal of human learning begins with observing others perform tasks (Bandura, 1986). Vicarious learning is developed more readily when the observer considers the person being observed to have similar skills to himself or herself. Children watch and then imitate their parents. In this process of observing activities, some learning occurs before the person is required to attempt any of the requisite behaviors. For example, children observe their parents driving cars for years before they begin. They observe how the wheel is turned, how to start the car, what the highway signs mean, and so on. This learning decreases the number of new skills that must be learned when the children reach an appropriate age and actually begin to drive the car. They already understand the component skills and now need to learn to execute them independently (Bandura, 1986). Vicarious learning is not as powerful a source of information as enactive learning, but it is still very important.

Persuasion. Persuasion is a frequently used means of convincing someone that his or her self-assessment is incorrect. However, it is the weakest form of information with respect to altering perceived self-efficacy (Bandura, 1986). Persuasion will be effective in altering beliefs only if the current belief is close to the belief that is being proposed. Subsequent performance quickly affirms or denies the new belief. Thus, accurate assessment of the other person's ability is required if persuasion is to succeed.

Physiological state. People read their level of somatic arousal as an indication of competency (Bandura, 1977). Thus, if your heart rate increases and you begin to sweat, you interpret these reactions as an indication that the activity you are approaching is in some way threatening. Strategies that decrease the level of arousal (relaxation techniques) have been found to enable people to feel more efficacious. This feeling of efficacy in turn leads to a willingness to attempt the behavior that had pre-
viously resulted in a state of physiological arousal, and to success experiences (Bandura, 1986).

Cognitive appraisal. Personal performance accomplishments, vicarious experience, persuasion, and physiological arousal are the types of experiences that affect perceived self-efficacy. However, the degree to which these experiences influence perceived self-efficacy is determined by the person's cognitive appraisal and integration of these experiences (Bandura, 1982; Gist & Mitchell, 1992).

Gist and Mitchell (1992) developed a model to explain the effect of these experiences on perceived self-efficacy. They suggested that the cognitive appraisal and integration process has three components. The first component is the analysis of the requirements of the task. The more complex the task and the less previous experience one has with a task, the harder it is to accurately assess one's perceived self-efficacy for the task. The second component is the analysis of the degree to which success or failure is attributed to oneself rather than others or to chance. If one believes that one is successful due to a skill one possesses, then perceived self-efficacy for the task will be heightened. However, if one believes that one was successful because of chance, the actions of others, or the environment, perceived self-efficacy will not be affected. The third component is the analysis of personal and situational resources and constraints that affect the task at hand. This appraisal process involves the assessment of personal factors such as skill, motivation, anxiety, and desire, as well as situational factors, such as distractions, support of influential others, and competing demands.

The three cognitive appraisal processes will result in the subjects' determination of the degree of perceived self-efficacy for a task, which in turn affects the person's willingness to participate or persevere with the task in the future, and hence will affect actual future performance.

Generalizability

The development of perceived self-efficacy is largely situation specific, with a tendency to generalize to similar activities (Ewart, Taylor, Reese, & DeBusk, 1983). Ewart and his colleagues studied the relationship between perceived self-efficacy and activity for a group of patients with post-myocardial infarction. These patients participated in treadmill testing and filled in a perceived self-efficacy questionnaire before the treadmill test, after the treadmill test, and after a counseling session that followed the treadmill test. The perceived self-efficacy questions covered walking, running, climbing stairs, engaging in sexual intercourse, lifting objects, and an overall estimate of ability to tolerate physical activity. Perceived self-efficacy ratings for the activities that used the same physical skills as the treadmill (walking, running, and climbing stairs) showed the greatest increase. With the addition of counseling (a form of verbal persuasion), the efficacy ratings for the other activities increased. Assistance with interpretation of the treadmill experience was necessary before generalization could occur.

Control

The degree of control the person perceives that he or she has alters the influence of success or failure on the development of perceived self-efficacy. Bandura and Wood (1989) studied the influence of perceived control on perceived self-efficacy in a simulated manufacturing environment. The degree of perceived control and the amount of success the subjects experienced were regulated through the design of the experiment. Subjects were randomly assigned to one of four groups. Each group received instructions designed to alter their perception of two constructs, personal control and performance expectations. The four groups were low perceived control with high performance expectations, low perceived control with low performance expectations, high perceived control with high performance expectations, and high perceived control with low performance expectations. The groups that were given high performance standards experienced less success than those with low performance standards. Subjects who viewed the organization as controllable, regardless of whether they were in the high or low performance expectations group, had higher mean self-efficacy scores than those who thought that they had little control over the organization ($p < .02$). Subjects in the high control, high performance standards group showed increases in perceived self-efficacy over three trials, whereas subjects in the high control, low success groups showed decreases in perceived self-efficacy ($p < .05$). Subjects who were led to believe that the organization was difficult to control demonstrated low self-efficacy regardless of whether they were in the high or low performance expectation group; that is, their perceived self-efficacy was low regardless of whether or not they were experiencing success.

Discussion of the Literature

Adolph Meyer, a major contributor to the philosophical basis of occupational therapy practice, recognized the value of the feelings of satisfaction and achievement associated with successful completion of a project (1922). Thus, from the early days of occupational therapy practice, the value of successful experiences, that is, performance accomplishments, was recognized. Activity programs were structured to ensure success because success was believed to lead the patient to try another, more difficult task. Occupational therapists have often described this process as the enhancement of self-esteem (Christiansen, 1991; Meyer, 1922); yet the activities the occupational therapy client performs are not always socially relevant. Therefore, it is postulated that success
with occupational therapy activities leads to an increase in perceived self-efficacy for these activities, which leads to a willingness to engage in and persist in future similar tasks. If the success experiences relate to socially relevant activities an elevation in self-esteem would also be predicted.

The occupational performance literature addresses the need to understand the effect of psychosocial factors on occupational performance (Christiansen, 1991; Pedretti & Pasquinnelli-Estrada, 1985; Trombly, 1989). An underlying assumption appears to be that psychological factors affect only the acquisition of skill and that once the skill has been learned it will be used outside the protected clinical environment. However, just as Bandura (1977) noted that people do not always perform optimally even when they have the requisite skills, clinicians have stated that occupational therapy clients do not always perform at the level one might predict on the basis of clinical observation of skill (Gage, 1992).

The Model of Human Occupation, a model that guides occupational therapy practice, addresses the discrepancy between skill and performance through, among other things, a concept similar to perceived self-efficacy: personal causation (Oakley, Kielhofner, & Barris, 1985). Personal causation is defined as “the collective beliefs that an individual has efficacious skills, is personally in control, and will succeed in future endeavours” (Oakley et al., p. 148). This construct is equivalent to the construct of perceived self-efficacy.

When discussing the influence of inefficacy (a term that Kielhofner has used in the same view as perceived self-efficacy), Kielhofner stated that “occupational dysfunction is at the level of inefficacy when there is an interference with performing meaningful activity accompanied by dissatisfaction with performance” (1985, p. 69). He went on to state that “sources of inefficacy may be environmental constraints, disease processes, or imbalanced lifestyles” (p. 69).

The importance of the strength of the person's belief in his or her ability to perform the specific component parts of life roles is not articulated. One’s perception of one’s ability to perform is considered to be a major behavioral determinant (Allen et al., 1990; Bandura, 1977, 1986; Bandura & Adams, 1977; Bandura & Wood, 1989; Ewart et al., 1986; Seydel et al., 1990; Shunk, 1982; Toshima et al., 1990; Wang & Richard, 1987; Wassem, 1992). Therefore, it is essential that the relationship of perceived self-efficacy to occupational performance be explored.

The terms perceived self-efficacy or efficacy expectations are beginning to appear in the occupational therapy literature. Crist and Stoffel (1992), when discussing the Americans With Disabilities Act as it applies to persons with mental impairments, discussed the value of perceived self-efficacy with respect to successful employment of persons with mental disabilities. Christiansen (1991) acknowledged that the “single characteristic of the individual that has the greatest influence on performance is one’s sense of competence” (p. 20), yet this concept is given only four paragraphs in the occupational therapy textbook written by Christiansen and Baum.

There is a growing recognition that clients’ perceptions of performance (perceived self-efficacy) are important. In the March 1993 issue of the American Journal of Occupational Therapy, professional leaders discussed the needs of the profession with respect to assessment. Authors cited the need to measure client perception of performance (Law, 1993), the need to identify the psychological factors that contribute to performance deficits and strengths (Bonder, 1993), and the need to develop means of remedying these psychological factors once identified (Bonder, 1993). Trombly stated that the overall goal of occupational therapy is to "enable the client to gain a sense of efficacy" (1993, p. 254). The Canadian Occupational Performance Measure (Law et al., 1991) uses client perception of performance as one outcome variable. However, there is a need to incorporate this belief into occupational therapy practices.

The influence of perceived self-efficacy on the person’s ability to cope with the effects of disability has also been articulated by Gage (1992). She was interested in determining why patients of equal physical impairment and rehabilitation potential do not progress at the same pace, and why, given similar goals, these patients attain different levels of independent function. After a review of the literature on coping, Gage formulated the Appraisal Model of Coping as a guide to assessment and intervention for occupational therapists. The Appraisal Model of Coping was based on the Cognitive Relational Theory of Coping and Emotion (Lazarus & Folkman, 1984) and Social Cognitive Theory (Bandura, 1977). Coping was defined by Lazarus and Folkman (1984) as the process through which people manage the demands and emotions generated by person–environment relationships.

The model presented by Gage identified 12 factors that influence the ability of persons to cope with their disability or any other life event that taxes personal resources. One of these 12 factors is perceived self-efficacy. In this model, perceived self-efficacy is considered by Gage to be particularly salient to the practice of occupational therapy because of its potential ability to explain the discrepancy between skill developed in therapy and occupational performance outside the protected clinical environment. However, the model is, as yet, conceptual and must be tested to determine the specific nature of the influence of perceived self-efficacy on coping with occupational performance deficits.

Enhancing Occupational Performance

A recognition that the client's level of perceived self-efficacy for a specific activity influences the likelihood of the client performing that activity outside the protected clini-
cal environment has far-reaching implications for the practice of occupational therapy. This recognition brings with it an understanding that a client's ability to perform a specific skill in the clinical environment may not mean that the client will use the skill in his or her usual contextual environment. What good is treatment if it does not generalize to the use of the skill in the community?

Occupational therapists must learn how to evaluate their client's level of perceived self-efficacy and to develop techniques that not only improve clients' skills, but also enhance their self-efficacy for use of those skills in the community. As previously presented, empirical findings about the influence of perceived self-efficacy on clinical outcome are already available (Ewart et al., 1986; O'Leary et al., 1988; Toshima et al., 1990; Wassem, 1992). Although these studies do not specifically look at occupational performance activities or the influence of the occupational therapy process on perceived self-efficacy, they do provide information that is relevant to occupational therapy practice. Empirical studies have also investigated the relationship between perceived self-efficacy and the initiation or adherence to health-promoting behaviors (Seydel et al., 1990; Slater, 1989; Stuifbergen et al., 1990). The results of these studies are increasingly relevant to occupational therapists as more and more therapists become involved with primary and secondary prevention activities. In addition, the process of occupational therapy is often one of teaching new skills or teaching new ways to perform familiar activities. Thus, articles that present data about the relationship between perceived self-efficacy and learning are also relevant to occupational therapists (Shunk, 1982; Wang & Richard, 1987).

It is important to remember that the articles cited in this paper are just a small sampling of the perceived self-efficacy literature available to occupational therapists. Occupational therapists working in various fields are encouraged to search the literature for articles that have valuable information about perceived self-efficacy within their area of practice. Occupational therapy research studies to add to this knowledge base are encouraged. There are many possible applications that arise from the attributes of perceived self-efficacy as presented in the section of this paper titled "History of the Construct." These themes can be categorized into three major categories: assessment, outcome, and therapeutic process.

Assessment and Outcome

Previous research has demonstrated a link between clinical outcomes and perceived self-efficacy (Allen et al., 1990; Bandura, 1977, 1986; Bandura & Adams, 1977; Bandura & Wood, 1989; Ewart et al., 1986; Seydel, Taal, & Wiegmans, 1990; Shunk, 1982; Toshima et al., 1990; Wang & Richard, 1987; Wassem, 1992). Thus, it is important to derive ways to measure perceived self-efficacy for occupational performance activities that will enable the exploration of its relationship to outcome. For example, perceived self-efficacy is thought to explain the variance between development of skill and performance of that skill in the community. It is, therefore, important to explore the influence of increases or decreases in perceived self-efficacy for occupational performance activities on treatment outcomes. The level of perceived self-efficacy that is required before a client will use the skill independently in the community must be determined. The belief that the development of a skill is not sufficient to ensure successful occupational performance in the absence of an adequate level of perceived self-efficacy leads to a need to monitor a client's perceived self-efficacy during the treatment process. The ability to demonstrate occupational competence in the clinical environment should no longer indicate successful treatment outcome. Therapists must find ways to determine whether their clients are using these skills in the community. Because perceived self-efficacy is believed to be a good predictor of future performance, therapists need to establish the level of perceived self-efficacy that is likely to result in use of the skill in the community. This level may then be useful in the determination of when to discharge from therapy. However, individual variation will always necessitate individual follow-up to ensure that a given client has been successful.

Therapeutic Process

The section of this paper titled "Influencing the Strength of Perceived Self-Efficacy" provides occupational therapists with specific strategies for increasing perceived self-efficacy in the clinical environment. For example, perceived self-efficacy is enhanced through personal performance accomplishments; that is, by actually doing the activity or very similar activities. In fact, it is suggested that perceived self-efficacy for an activity performed in the occupational therapy department will only generalize to very similar activities. Thus, occupational therapists must use realistic activities that simulate the contextual environment of the client. This will be easy for therapists working in the community who provide services in the client's home; it will be more difficult for therapists working in institutional environments. The relevance of reductionist activities such as peg boards and puzzles must be questioned. How does the mastery of these component skills relate to changes in perceived self-efficacy and actual performance for personally important life activities?

The role of vicarious learning with respect to the development of occupational competence must also be explored. If, in fact, a great deal of human learning begins with observing others perform tasks, it would be important for clients to observe the successful performance attempts of their peers. Bandura (1977) suggested that vicarious experience is most powerful when the participants consider themselves to have similar skills. Thus,
modeling by the therapist may be ineffective, and consumer self-help groups might be encouraged.

Gist and Mitchell (1992) suggest that self-efficacy beliefs are most accurate when clients are rating familiar activities because they understand the relationship between the skills required to perform the task and the skills they possess. For occupational therapy clients the knowledge of the skills they possess has often been affected by the onset of a disabling condition. Although the clients are aware of the skills required for occupational performance activities, they may believe that their disability has robbed them of these skills. Thus, the occupational therapist must provide them with a safe environment within which to experiment with their altered level of performance and to develop a new understanding of their efficacy.

Therapists often try to convince clients that they are able to go home and live independently, or return to work, only to be confronted with a barrage of reasons why the client is not yet ready. These patients are labeled as fearful or, worse yet, as malingerers. Perhaps it is simply their perceived self-efficacy for home management or work activities that has not yet reached the level necessary to engage in the activity independently. If one accepts that persuasion is the least influential method of raising efficacy expectations, then the therapist must devise new intervention techniques. The treatment plan must incorporate vicarious learning and relevant personal performance accomplishments if success is to occur. The use of such simulations as Easy Street, a stay in an apartment located in the protected clinical environment, or a home visit with the therapist may be a better solution than attempts to persuade.

Perceived self-efficacy increases more when the client is in control. Thus, it is important for therapists to enable clients to articulate their needs and have a real voice in the therapeutic process. Tools such as the Canadian Occupational Performance Measure (Law et al., 1991) may create a feeling of control and enhance outcomes.

Summary

Perceived self-efficacy has great relevance to the practice of occupational therapy. It is consistent with the fundamental philosophical beliefs of the profession, may enhance and predict outcomes, and has a strong empirical basis that suggests specific changes to current occupational therapy treatment practice. Occupational therapists are challenged to develop, test, and publish these linkages.

Many of the attributes of perceived self-efficacy are relevant to occupational performance. By monitoring and working to enhance perceived self-efficacy, occupational therapists may be better able to explain the variance between development of skill and performance of that skill in the community, ensure successful occupational performance in the community, predict future performance, and enable occupational competence.

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References


References


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**Coming in June:**

**Special Issue on the Neonatal Intensive Care Unit**

- Infant mental health in OT practice in the NICU
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