Rehabilitation and Health Assessment

Applying ICF Guidelines

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Overview

The personal values held by rehabilitation and health care clients influence in important ways how they comprehend and respond to health challenges or treatment interventions. For instance, affirming important personal values is associated with a willingness to participant in challenging or potentially high reward activities (Crooker, Niiya, & Mischkowski, 2008). Accurate assessment is the basis of effective rehabilitation interventions. Values assessment in rehabilitation and health care is in its infancy (Mpofu & Oakland, 2006). This chapter considers the nature of values and their relevance to and assessment in rehabilitation and health care. It surveys values assessment instruments with potential for rehabilitation intervention and suggests some ways in which

research and practice in values assessment in rehabilitation and health care settings can be enhanced.

Learning Objectives

By the end of this chapter, the reader should be able to:

1. Define values in the context of rehabilitation and health care;
2. Explain the relevance of personal values to rehabilitation interventions;
3. Describe the commonly used instruments and procedures for assessing values;
4. Evaluate the evidence for using specific values assessment instruments in rehabilitation and health settings; and
5. Discuss key considerations in developing and using client- or patient-oriented measures of values for rehabilitation and health interventions.

Introduction

Despite the spectacular advances in medical technology in the last half century, the costs of rehabilitation and health care continue to escalate phenomenally, and many health care providers and rehabilitation clients or patients experience difficulties with meeting the costs of health care. A large proportion of these health care costs are from treating preventable health conditions that patients have or develop from a primary health condition (Werthamer & Chatterji, 1998; World Health Organization [WHO], 1999, 2001b) or from use of treatment interventions in which patients are not committed (Mpofu, Crystal, & Feist-Price, 2002; Mpofu & Oakland, 2006). A way to de-escalate health costs is to develop efficacious treatments that meaningfully engage patients in their rehabilitation or health care. Patients or rehabilitation clients would be more willing partners in preventive health if the procedures and outcomes for preventive health were built more on patients' health-related values than is currently the case.

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Personal values play a significant role in the ways patients or individuals with chronic illness or disability interpret the meaning of a chronic illness or disability (Danford & Steinfeld, 2003; Schwartz & Sprangers, 1999; Scofield, Pape, McCracken, & Maki, 1980; Wright, Rudicel, & Feinstein, 1994) and, indirectly, their rehabilitation progress through the affirmation of their self-worth or integrity (Mpofu & Bishop, 2006; Mpofu & Oakland, 2006; Orbell, Johnston, Rowley, Davey, & Espley, 2001; Sinclair, Fleming, Radwinsky, Clupper, & Clupper, 2002). For example, presurgery personal goals predicted activity and participation at 9 months after knee-joint replacement (Orbell et al., 2001). The prospective health predictions of more than 75% of people with chronic illness or disability were unreliable if based only on knowledge of their physical functioning (Kivioja & Franklin, 2003). The meanings that patients impute on their conditions influence their health outcomes beyond those explained by objective functional limitations. Patient health-related values motivate their recovery and sustenance of good health.

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Surprisingly, there currently are no measures of health-related values for use in rehabilitation and health settings that could be used to plan, monitor, or evaluate rehabilitation interventions. For example, a search for client values associated with rehabilitation and health care from the major databases on health measures (e.g., Health and Psychosocial Instruments and the Citation Index of Allied Health Literature) using an array of search terms (e.g., value(s), measure(s)/ment, scales, and consumer, customer, disability, activity, participation, community living) was unproductive. Measures of values are more developed for career interventions with typically developing others in vocational or work settings rather than rehabilitation and health settings, despite the fact that work is a widely acknowledged rehabilitation and health intervention. This chapter considers prospective assessment for health-related values for use in rehabilitation and health settings.

Definitions and Theories of Values

The concept of *values* is one that is widely recognized across the various specialties of psychology and the health sciences (Kluckhohn, 1951; Kluckhohn & Strodtbeck, 1961; Rokeach & Ball-Rokeach, 1989; Wright, 1983). The conceptual richness of the construct of values has encouraged several definitions and associated theories. For example, Kluckhohn (1951) defined values as "a conception of the desirable which influences the selection from available modes, means, and ends of action" (p. 395). Similarly, Rokeach (1973) defined values as "an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence" (p. 3). The significance of value-directed goals is also acknowledged by Schwartz, who defined values as "desirable, transituational goals varying in importance, that serve as guiding principles in people's lives" (1996, p. 2), and by Nevill and Super (1986), who defined values as need-based models of behavior that are behind a person's goal setting and implementation activity. Mpofu and Bishop (2006) weighted process factors in value enactment at the individual level when they defined values as "preferences or personally derived decisions about the importance or meaning of some aspect or component of self that are manifested cognitively, socially, and behaviorally through prioritizing, emphasis, or the investment of resources, such as time or psychological attention" (p. 148). Values are inherently related to the self-concept. By representing the ideals and goals by which the self is evaluated in the present, and toward which the self is directed in the future, values create an integral aspect of the experience and evaluation of self (see Table 18.1).

Characteristics of Values

Although specific definitions of values vary somewhat in focus and content, researchers have consistently identified several common characteristics of values. First, values influence behavior (Hitlin & Pilliavin, 2004). Although it is certainly the case that other motivational forces also function to shape individual and group behavior, values represent the goals or ideals toward which

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18.1 Types of Values and Their Functions		
Rokeach, 1973		**Nevill & Super, 1986**
Instrumental Values	*Terminal Values*	*Ability Utilization*
Ambitious	A comfortable life	Achievement
Broad-minded	An exciting life	Aesthetics
Capable	A sense of accomplishment	Altruism
Cheerful	A world at peace	Autonomy
Clean	A world of beauty	Creativity
Courageous	Equality	Economic rewards
Forgiving	Family security	Lifestyle
Helpful	Freedom	Physical activity
Honest	Happiness	Prestige
Imaginative	Inner harmony	Risk taking
Independent	Mature love	Social interaction
Intellectual	National security	Variety
Logical	Pleasure	Working conditions
Loving	Salvation	Cultural identity
Obedient	Self-respect	Physical prowess
Polite	Social recognition	Personal identity
Responsible	True friendship	Advancement
Self-controlled	Wisdom	Economic security

From "Assessment of Value Change in Adults with Acquired Disabilities," by E. Mpofu and T. Oakland, 2006, in M. Hersen (Ed.), *Clinician's Handbook of Adult Behavioral Assessment* (pp. 601–630). New York: Academic Press.

behavior is directed. As Sagiv, Roccas, and Hazan suggested (2004), values are social and cognitive representations of the goals that influence individuals' perceptions and direct their decisions, choices, and behaviors. Conversely, from an assessment perspective it may also be said that behavior reflects values, or that through observing one's actions, decisions, and behaviors, one's values may be inferred.

Second, although values are enduring in their influence of behavior (as reflected in the consistency and continuity of personality and culture), they are also learned and shaped by developmental, personal, and social experiences. The concept of value change, discussed later in this chapter, and the various theories that describe value change as a response to changing health, represent conceptions of the mechanisms by which this modification of the value structure may occur.

Third, values are socially learned and culturally dependent and exist within a complex and fluid system. Values develop and are modified, prioritized, and reprioritized as the result of social influence, cultural and societal movements, and personal experiences (Kluckhohn & Strodtbeck, 1961; Nicholson & Stepina, 1998; Rohan & Zanna, 1996; Rokeach, 1973; Seligman & Katz, 1996). For

instance, goals that, due to changes at the personal, societal, and external environmental level, become ineffectual, counterproductive, or maladaptive may be modified or restructured. At the individual level, social and cultural influence, including the family's influence on the individual, are essential to both value development and value change throughout the lifespan.

Finally, researchers (Rokeach, 1973; Schwartz, 1996) agree that values occur in the context of a system but differ with respect to their salience in expressing the core identity of the system they represent. Values are also perceived to differ in number and organization within a system and also in the goals to which they are aligned (Montgomery, Persson, & Ryden, 1996; Rokeach, 1973). For example, Rokeach (1973), Schwartz (1996), and Nevill and Super (1986a, 1986b) have all offered differing conceptual frameworks. Montgomery et al. and Schwartz have both suggested models in which a larger set of values, 82 and 56 respectively, could be assimilated into a smaller group of 10 factors or types. Rokeach and Nevill and Super postulated that the number of values that are possessed by individuals is relatively small. Rokeach (1973) proposed a total of 36 values, divided into 2 primary groups: terminal and instrumental. In this approach, *terminal* values are defined as the idealized end states. *Instrumental* values are regarded as the desirable attitudes or behaviors for accomplishing these terminal values. Nevill and Super proposed a model consisting of 21 different values. These models are further described later in this chapter.

Applicable ICF concepts

Within the International Classification of Functioning, Disability, and Health (ICF) structure (WHO, 2001a), values as a health construct fall under the personal domain, particularly to the extent that they are an aspect of the self-concept, which is impacted by health conditions. Values are also an aspect of the participation in the sense that individuals, in their efforts to engage in preferred activities, negotiate environments that are value-laden and influence their rehabilitation outcomes (Mpofu & Bishop, 2006).

Self and Values

The congruence in the relationship between one's values and one's behavior is an important element of well-being (Kasser, 2006; Kasser & Ryan, 2001; Sagiv et al., 2004). Research in this area concerns such questions as whether certain values are inherently healthy or health promoting. Other research has examined the negative impact of values on health and well-being (e.g., Deci & Ryan, 1985; Sagiv et al.) and also how values may be modified or made salient for the promotion of health (e.g., Carver & Baird, 1998; Chirkov, Ryan, Kim, & Kaplan, 2003; Harvey et al., 1992). For instance, competing personal values are linked to intrinsic and extrinsic goals that influence health and well-being (Carver & Baird, 1998; Chirkov et al., 2003; Sheldon & Elliot, 1999). Understanding personal values as goals or motivators that shape behavior leads to a number of important implications for health and well-being.

Value-change theories propose that an adaptive shift in the importance and/or awareness of values occurs in response to disability, illness, or other

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life stresses (e.g., Dembo, Leviton, & Wright, 1956; Linkowski, 1971; Mpofu & Houston, 1998; Sprangers & Schwartz, 1999; Wright, 1983). Such models include, for example, value change (Dembo et al., 1956; Wright, 1983), "preference drift" (Groot & Van Den Brink, 2000), "domain compensation" (Misajon, 2002), "disability centrality" (Bishop, 2005), "systemic" (Mpofu & Oakland, 2006), and "response shift" (Schwartz & Sprangers, 1999, 2000). For example, the response shift model suggests that adaptation involves a change in the individual's values (Schwartz & Sprangers, 1999, 2000).

Researchers have proposed the occurrence of an adaptive value-change process (Linkowski, 1971; Menzel, Dolan, Richardson, & Oslen, 2002; Schwartz & Sprangers, 2000; Sprangers & Schwartz, 1999; Wright, 1983). For example, in Wright's approach, specific forms of value restructuring are aimed at normalizing the disability experience or regarding the disability as non-devaluing. Schwartz and Sprangers (2000) have explained value change from the experience of disability as a response shift to accommodate the disability experience in the most adaptive way. Rehabilitation clients' or patients' responses to chronic illness or disability are influenced by their personal values, and these values are reflected in their attitudes and behaviors toward rehabilitation interventions (Livneh & Antonak, 1994).

Activity, Participation, and Values

Activity and participation have been explored in terms of their implications for health promotion, self-management, psychosocial adaptation to chronic illness and disability, psychological well-being, adherence to treatment, help-seeking,

Discussion Box 18.1.

DEVELOPMENTAL EFFECTS OF DISABILITY

Studies (e.g., Mpofu & Bishop, 2006; Mpofu & Houston, 1998) have documented potential differences in disability- and health-related values in people with acquired disabilities compared to those with developmental disabilities. For instance, individuals with developmental disabilities appear to construct a value system that accommodates their disability-related difference over the life span, whereas those with acquired disabilities seem to reconstruct or reprioritize their value system in response to the experience of disability.

Questions:
In what specific ways could the history of a disability influence adaptation or living with a disability? How may such differences be assessed?

Would the quality of adaptation to a disability with a developmental   AQ3
disability be superior to that with an acquired disability? Explain your
answer.

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and other concerns (Cooper et al., 2003; Karel, 2000; Levine, Plume, & Nelson, 1997; Ozer & Kroll, 2002; Pellissier & Venta, 1996; Sinclair et al., 2002). For example, rehabilitation clients or patients are likely to be motivated in their rehabilitation goals if they perceive rehabilitation interventions to be relevant to enhancing their participation in preferred activities and environments (Ozer & Kroll, 2002). Overvaluing of service provider perspectives (which reflect provider rather than patient values) could hinder effective rehabilitation planning and intervention because service provider perspectives may be at variance with those of the rehabilitation client (Heinemann, Bode, Cichowski, & Kan, 1998; Sneeuw et al., 1997). Rehabilitation service providers may misperceive client motivation and commitment to rehabilitation outcomes, with the result being that clients are hampered in their participation of the rehabilitation process and outcomes (Davies & Cleary, 2005; Lynch & Thomas, 1994; Rosenthal & Berven, 1999). The experience of chronic illness or disability in a family member impacts the family's resource utilization (personal, time, and material) and involvement with the individual with a disability, which in turn influences the quality of family and community participation of the person with a disability (Mpofu & Wilson, 2004; Rees et al., 2002). Family values mediate the impact of disability on activity and community participation by the individual with a disability. Communities that in their attitudes are disability friendly (as reflected in enabling legislation, infrastructure, and service systems) project values that make it likely that the individual with a disability will attain a preferred lifestyle (Livneh, Martz, & Wilson, 2001).

Values are unlike traits in that they are malleable and allow for more cognitive control in their expression as compared to traits. Values change as a function of different demands in the environment and from interactions with other people (Rohan, 2000). Positive changes in values will, in part, enable the individual with disabilities to experience greater participation in preferred environments.

History of Research and Practice in the Assessment of Values

One of the earliest models of human values was by the German philosopher Eduart Spranger (1928). Spranger proposed that six basic attitudes or value types (theoretical, economic, aesthetic, political, social, and religious; Rohan & Zanna, 2001) are present in each person, with different proportions, and with one of them dominating. This work later became the basis for one of the earliest standardized value assessment instruments: the Study of Values (Allport, Vernon, & Lindzey, 1960). The Study of Values measure assessed the relative importance of the six values proposed by Spranger and became one of the most popular value measures for years (see Braithwaite & Scott, 1991, for a more detailed discussion of early value measures). The basic assumption of Spranger's model of values was that there is a universally valid set of human values and that individual differences in values are explained by how values are organized or how much importance is attributed to them by each person. Both these notions appear to have received empirical support (e.g., Schwartz, 1992).

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Important historical milestones in the development of measures of values include the works by Rokeach (1973), Schwartz (1992), Super (1970), and Dawis and Lofquist (1984).

Rokeach's Value Theory

Rokeach's (1973) value theory is credited as a major force in the assessment of values. He distinguished between goals (terminal values) and modes of conduct (instrumental values). Terminal values refer to desired ends (e.g., a comfortable / prosperous life), while instrumental values refer to desired means (e.g., being broad-minded or being helpful). Based on this distinction, he created the Rokeach Value Survey (Rokeach, 1973), which remains one of the most popular values inventories.

The *Rokeach's Values Survey* (RVS; Rokeach, 1973) contains a list of 18 terminal values and 18 instrumental values and asks the client to rank the values according to their importance. Based on the rankings, the most and the least important terminal and instrumental values of a client can be identified. Ranking of values was the preferred assessment method because in real live situations values are often in competition with each other and a person is forced to choose among them. However, others have argued that scaling values is more desirable because of preferable statistical proprieties. For example, it allows for longer lists of values to be assessed, and it also allows test-takers to give equal weights to values of equal subjective importance (Schwartz, 1994). Finally, there is some empirical evidence to suggest that rating offers more predictive validity because people who are forced to rank values often do so based on trivial distinction (Maio, Roese, Seligman, & Katz, 1996).

Applications of the RVS to rehabilitation and health care settings appears rare to nonexistent (Braithwaite & Law, 1985; Mpofu & Houston, 1998; Mpofu & Oakland, 2006). Braithwaite and Law criticized the RVS for not including values important to physical fitness and well-being. Rokeach's model of values and the instrument upon which it is based has also been criticized for merely presenting a list of unrelated values without a supporting theory of an underlying value structure. The lack of supporting interpretive theory makes it impossible to understand the consequences of high priorities on some values rather than others (Rohan, 2000). Finally, the usefulness and empirical validity of the instrumental vs. terminal value dichotomy has been questioned because instrumental values and terminal values influence each other (Mpofu & Oakland, 2006; Schwartz, 1992).

Schwartz's Circumplex Model of Universal Values

Shalom Schwartz's (1992) work explicitly drew upon Rokeach's work. He proposed a set of universally human values that can be organized into two dimensions: Openness to Change versus Conservation, and Self-enhancement versus Self-Transcendence. Openness to Change versus Conservation is defined by the conflict between being motivated "to follow their own intellectual and emotional interests in unpredictable and uncertain directions" or "to preserve the status quo and the certainty it provides in relationships with close others, institutions, and traditions" (p. 43). Self-Enhancement versus Self-Transcendence relates to the

conflict between concern for the consequences of one's own and others' actions for the self and concern for the consequences of one's own and others' actions in the social context.

Schwartz proposed 10 values that are arranged along the 2 dimensions defined previously so that some values are closely related, while others can be considered as opposites and in conflict to each other: (1) Power: Social status and prestige, control or dominance over people and resources; (2) Achievement: Personal success through demonstrating competence according to social standards; (3) Hedonism: Pleasure or sensuous gratification for oneself; (4) Stimulation: Excitement, novelty, and challenge in life; (5) Self-direction: Independent thought and action—choosing, creating, exploring; (6) Universalism: Understanding, appreciation, tolerance, and protection for the welfare of all people and for nature; (7) Benevolence: Preservation and enhancement of the welfare of people with whom one is in frequent personal contact; (8) Tradition: Respect, commitment, and acceptance of the customs and ideas that traditional culture or religion provide; (9). Conformity: Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms; and (10) Security: Safety, harmony, and stability of society, of relationships, and of self. Schwartz and colleagues have currently the most active research project on human values, which provides support for the accuracy and cross-cultural validity of this value model (e.g., Schwartz & Boehnke, 2004; Schwartz & Sagie, 2000).

The *Schwartz Value Survey* (SVS; Schwartz et al., 2001) contains less-abstract items that are more accessible to a wider population than the SVS, which is broadly applied in value research but not conceived as a tool for assessment practice. Research could not be identified on the use of the SVS in rehabilitation and health settings.

Super's Theory of Values

Super (Nevill & Super, 1986a; Super & Sverko, 1995) distinguished among 5 basic value orientations (utilitarian, individualistic, self-actualization, social, and adventurous) and 18 specific values (e.g., advancement, autonomy, social interactions). Super's model is the basis for the Values Scale.

The Values Scale (VS; Nevill & Super, 1986b) is a frequently applied inventory in counseling practice. The Values Scale is a 105-item scale that measures extrinsic and intrinsic life and work values according to the importance attributed to 21 different values, such as ability utilization, achievement, autonomy, economic rewards, working conditions, or cultural identity. Each value is assessed with five items, and results can be interpreted as the relative score obtained for each value. For example, the values can be ranked according to their scores to create a values hierarchy for a client (Nevill & Kruse, 1996). No norms data are yet available to compare the scores of an individual test-taker to a representative sample. Ranking values based on the obtained scores can present interpretation problems if a client rates all of the values as "very important."

The *Salience Inventory* (SI; Nevill & Super, 1986a) is a 170-item measure designed to assess the importance of five life–career goals: home and family, community service, studying, working, and leisure activities. Items include 50 participation items, 50 commitment items, and 70 value expectation items.

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Participation measures what an individual actually does or has recently done in each area; commitment rates the degree to which a person is committed to pursuing each life role; and value expectation is based on the degree to which an individual expects that major life satisfactions or values are found in each role (Nevill & Calvert, 1996, for a review of the applications of the SI). Based on a large-scale study of values in 10 countries, Super and Sverko (1995) developed the *Work Importance Study* (WIS), which measures both general and work specific values. The WIS does not account for how work values are influenced in their salience by different aspects of work itself (Zytowski, 1994).

The VS was low to moderately correlated with Minnesota Importance Questionnaire (MIQ; Gay, Weiss, Hendel, Dawis, & Lofquist, 1971) scores in students with hearing impairment. There is very limited evidence to support the use of the VS, SI, and the WIS with rehabilitation and health populations.

Dawis and Lofquist's Model of Values

Dawis and Lofquist (1984) proposed that work values and needs congruence to job characteristics were the most important aspects of job choice and satisfaction. They proposed that 20 vocational needs (e.g., ability utilization, variety, social-service, creativity) can be identified. Factorial analysis of these needs revealed six underlying values: achievement, comfort, status, altruism, safety, and autonomy.

The Dawis and Lofquist values model was the basis for the MIQ (Gay et al., 1971). The MIQ assesses the degree to which a person emphasizes 20 psychological needs, which can be summarized into six work values. The goal of the MIQ is to identify needs and values of a client and to match those to corresponding work environments. The rationale behind this approach is that a person's needs affect his or her career choices, and the degree to which a person's needs are met influences satisfaction with work. The MIQ allows the comparison of one's needs and values to the reinforcement patterns of different occupations in order to locate a good match for one's preferences.

There are two forms of the MIQ, and both are self-administered. In both versions, clients are presented with 20 different statements. In the first, test-takers are asked to rank these statements in groups of five according to their personal preference regarding an ideal job. The second version requires clients to decide which of two statements is more important to them when thinking about an ideal job, which results in 190 pairs of statements to be rated. The results can be compared to normative data for different age groups and by gender. An ipsative (intraindividual) approach to results interpretation is possible in which the observed preferences are only interpreted in the light of the personal meaning for the client instead of giving priority to the actual values of the obtained scores (Brooke & Ciechalski, 1994). Regardless of whether norm data are applied or not, a possible approach to interpretation is to use the obtained scores to create an individual's hierarchy of needs and use this as a starting point to explore suitable career options.

The MIQ was developed, in part, to assess changes in vocational needs in clients from the impact of acquired disability and also their use of leisure time (Gay et al., 1971). There is limited evidence for the use of the MIQ with rehabilitation and health clients (Hackbarth & Mathay, 1991; Mpofu & Oakland, 2006). The   AQ4

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Discussion Box 18.2

VALUE CATEGORIES

The Schwartz Value Survey and similar measures of personal values have isolated broad categories of values, such as Power/Status/Prestige, Achievement, Hedonism, Self-Direction/Autonomy, Benevolence/Altruism, Conformity and Security, Achievement/Advancement, and Creativity. A more extensive list of values is included in Table 18.1 in this chapter.

Questions:
1. Using these personal values as a starting point, to what extent do you think they are relevant in a general rehabilitation setting in terms of their impact on the smooth progression of the rehabilitation process?
2. Take two values and outline how one may hinder and how the other may assist in the client's smooth transition through the rehabilitation process.
3. Using two different personal values, discuss how each of these may impact upon the vocational outcome for a client where the aim of their rehabilitation process is back to alternate appropriate work or into the workforce for the first time.
4. What value does the assessment of personal values bring to the task of career decision making in a general sense?

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factorial structure has, among others, been replicated among vocational rehabilitation clients (Lofquist & Dawis, 1978). MIQ measures correlated significantly with measures of work satisfaction in workers with mental retardation (Melchiori & Church, 1997). The comparative judgment format may present difficulties to clients with significant cognitive impairment or other severe disability.

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Current Practices in Values Assessment

Values are dynamic constructs best assessed with measures that combine both qualitative and quantitative approaches (Mpofu & Houston, 1998). Important considerations are the ability of the rehabilitation client or patient to identify values that are important to him or her (rather than being constrained by a predetermined set of values) and the ability then to express his or her experience with these values in a personally meaningful way. A related issue is the limited use of qualitative assessment techniques in values assessment.

Qualitative Approaches

Qualitative assessments typically involve examining forms of construction such as narrative, autobiography, life story, and the subjective career (Savickas, 1992;

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Young & Collin, 2004). Instead of objectively assessing an individual's values in order to match a client to the most suitable occupation, the aim of assessment from a constructivist stance is to "open up avenues of movement, promote empowerment, support transitions, and assist the client gain eligibility for more participation [in their future]" (Peavy, 1998, p. 180). Qualitative assessments can be used in combination with more formal assessment measures (such as the ones discussed previously; see also McMahon & Patton, 2002; Whiston & Rahardja, 2005). Counselors could also use a qualitative follow-up session to a standardized value assessment where the subjective meaning of the retrieved results and their integration in the client's life story are the focus. Cart Sorts and Genograms are two commonly used qualitative approaches to the assessment of values.

Cart Sort Procedures

The *Personal Values Cart Sort* (PVCS; Miller, C'de Baca, Matthews, & Wilbourne, 2001) is a card-sorting tool that is available for free from the authors' Web site (http://casaa.umd.edu). It includes 50 different values that can be sorted into five categories ranging from "least important" to "most important." The top values are then sorted according to their subjective importance, which can be used as the basis for further discussion.

The *Career Values Cart Sort* (CVCS) planning kit (Knowdell, 2002) uses 54 different values that are to be stored in one of five categories: "Always Valued," "Often Valued," "Sometimes Valued," "Seldom Valued," and "Never Valued." Clients are then asked to sort the cards in each category according to their relative importance and copy the results to a summary sheet. With the help of a worksheet, clients are then encouraged to name their eight most important values and think about how they relate to their current career decision and possible conflicts that might arise in trying to satisfy these values. Evidence for the use of the PVCS and CVCS with rehabilitation and health clients could not be found.

The Values Genogram

Research shows that the family has a strong influence on value development. For example, parents' social class, vocation, education, and specific family characteristics, such as childrearing practices, all shape values of the children (Hitlin & Piliavin, 2004). The family is also among the strongest influences of career development beginning in childhood and continuing into adulthood (Whiston & Keller, 2004).

A genogram is a qualitative assessment method to gather information about a client's history, background, and life experience. The process can enrich a client's understanding of his or her present situation and facilitate planning for the future. Gysbers (2006) described how a career genogram can be conducted and integrated into the counseling process. The first step is to share the purpose of the genogram activity, such as gaining a better understanding of the client's values and how they were influenced by his family, community, and life experiences. The second step is for the client to draw a genogram with names of all the family members over three generations. A value-specific genogram can then be created if the counselor asks the client to identify which values were most important to each person represented on the genogram. This can

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be done in writing with a follow-up discussion and more in-depth questions from the counselor, such as "What was most important for this person in his/her life?" "What did this person aspire to be or to achieve in his/her life?" "How would you describe this person's life-motto?" The information gained about the client's family values can then be related to his or her present situation to get a better understanding of the client's own values and how they influence the individual's life and career decisions. Research on the use of value genograms in rehabilitation settings could not be identified.

Research Box 18.1

EFFECTS OF WRITING ABOUT VALUES

Crooker, J., Niiya, Y., & Mischkowski, D (2008). Why does writing about important values reduce defensiveness? Self-affirmation and the role of positive other-directed feelings. *Psychological Science: Research, Theory and Application in Psychology and Related Sciences, 19*(7), 740–747.

Objective: The study investigated the influence of affirming personal values in explaining acceptance of potentially threatening messages to the self. The authors hypothesized that writing about values important to self would enhance positive self-perceptions as a loving and caring person, which would extend to openness to messages that ordinarily would trigger defensiveness.

Method: A culturally diverse sample of 102 psychology undergraduate students participated in the study (70% White, 12% Asian, 18% other; 27% smokers). They were in two conditions: experimental and control. In the experimental condition, participants wrote about a value important to them, and in the control condition, they wrote about a value unimportant to them. They then took a scale to assess the extent to which they experienced love and other positive feelings (e.g., joyful, proud, connected). After, they were given a task to assess the scientific merit of a fake research article on the effects of smoking (a presumed threatening message to smokers) to evaluate the scientific merits of the study findings.

Findings: Participants who wrote about values important to them reported higher feelings of love and connectedness compared to those who wrote about values unimportant to them. Smokers who wrote about values important to them were more positive in their assessment of the threatening message about smoking from the research article than were nonsmokers.

Conclusion: Writing about values important to the self enhanced the sense of love and being involved with others beyond self-serving

interests. It also reduced defensiveness to potentially threatening information from an external source. Priming values important to self has positive effects on well-being.

Questions:

Explain the openness to a potentially threatening message by smokers compared to nonsmokers.

To what extent does this study support the significance of values to health behavior?

Would asking people to write about a value important to the self be an acceptable measure of personal values in rehabilitation and health settings? Explain your answer.

Based on your reading of this chapter, what type of assessment procedure would writing about values important to self be? How could the scientific credibility of this procedure be enhanced?

Quantitative Approaches

The development of health values assessment tools has focused primarily on check lists or rating scales. The RVS and MIQ (previously considered) exemplify quantitative approaches to the assessment of values. In this section, we consider the Acceptance of Disability Scale (Livneh & Antonak, 1994) and O*NET-based value measures.

The *Acceptance of Disability Scale* (ADS; Linkowski, 1971) is a 50-item, Likert type, self-report measure of changes in values following disability. Items were written consistent with the value-change theory proposed by Beatrice Wright and colleagues (i.e., Dembo et al., 1956). Dembo et al. considered that adjustment to disability involved up to four value shifts: containment of disability effects (e.g., A physical disability may limit a person in some ways, but this does not mean he/she should give up and do nothing with his/her life in full), enlargement of scope of values (e.g., Though I am disabled, my life is full), subordination of physique (e.g., There are many things a person with a disability is able to do), and transformation from comparative to assertive values (e.g., Personal characteristics such as honesty and willingness to work hard are much more important than physical appearance and ability). Construct validity studies supported a one-factor structure that accounted for about 45% of the variance (Livneh & Antonak, 1994; Mpofu & Herbert, 2006). The measure has been used in research rather than as a clinical instrument.

The O*Net Measures

These comprise two measures based on the MIQ with updated and extended information (e.g., McCloy et al., 1999). The application and interpretation of the results is otherwise the same as for the MIQ. As is the case with the MIQ, the goal of the O*NET measures is to locate suitable occupations based on one's values and needs. O*NET draws upon an extensive database of occupations

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that is more up-to-date and extensive than the one available from the MIQ. This database is also continuatively updated based on actual job analyses. The measures can be downloaded and used for free from the U.S. Department of Labor's O*NET Web site (http://www.onenetcenter.org).

Super's *Work Values Inventory—Revised* (Zytowski, 2006) has been published as an online inventory on http://www.kuder.com and is an updated version of Super's (1970) original inventory focusing explicitly on work values. The inventory measures the importance of 12 work values (e.g., achievement, lifestyle, or variety) with 6 items each. The reading level is approximately sixth grade and the inventory takes 10–20 minutes to complete. Results are retrieved online as a two-page narrative and graph showing the assessed individual rank order of the values. A major advantage of the online inventory to the older paper-and-pencil version is that it provides a link to the O*NET database to locate potentially matching occupations with the test-takers values for further consideration and exploration.

The *Work Importance Profiler* (WIP; O*NET Resource Center, 2008) is a computerized version that uses the multiple-rank order format of the MIQ. The program then presents a list of occupations that match the test-taker's profile, sorted into categories that reflect different levels of educational requirements. The *Work Importance Locator* (WIL; O*NET Resource Center, 2008) is a shorter paper-and-pencil measure that uses a card-sorting task to determine the relative importance of the MIQ needs. This version might be useful if there is limited access to computers or for group administration.

Mixed Method Approaches

Some notable examples from the field of health-related quality of life (HRQoL) offer examples of potentially useful models of a combined qualitative and quantitative approach. For example, rather than presenting a patient with a set of predetermined HRQoL domains and asking the patient to rate his or her experience with them, the *Schedule for the Evaluation of Individual* QOL (SEIQOL; O'Boyle, McGee, Hickey, O'Malley, & Joyce, 1992; McGee, O'Boyle, Hickey, O'Malley, & Joyce, 1991) and the *Patient Generated Index of Quality of Life* (PGI; Ruta, Garratt, Leng, Russell, & Macdonald, 1994) have been designed to allow the individual's selection of personally important domains, and then to allow for the individual weighting of domain importance. The increased use of such approaches, combined with open-ended interviews and decision analytic approaches, would be an important development.

Particularly relevant for rehabilitation and health assessment is the notion that personal values change due to a change in health status when people adapt their values to cope with the new situation (Sprangers & Schwartz, 1999). The *Thentest* (Schwartz & Sprangers, 1999) is a measure of the extent that rehabilitation and health clients change their values to accommodate or adapt to disability experience. The basic procedure is to collect rehabilitation status data from a client using a preferred measure at a point in time (e.g., pretreatment) and then at another point in time (e.g., posttreatment or present time). The posttreatment perceptions of health are then retrospectively compared with previous perceptions (hence the *then* aspect of the test). For example, Schwartz, Sprangers, Carey, and Reed (2004) used the *Thentest* to assess value change in

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patients with multiple sclerosis at 5 years postillness. The patients showed a recalibration of personal values in valuing psychological functioning more than they did physical functioning earlier in the progression of the illness.

Research Critical to Values Assessment in Rehabilitation and Health

Research on values in rehabilitation and health settings is still in its early stages (Mpofu & Oakland, 2006). In the main, the focus has been on identifying the correlates of value change in specific rehabilitation settings and interventions (Livneh & Antonak, 1994; Mpofu & Herbert, 2006; Schwartz et al, 2004); the salience of rehabilitation values in specific disability populations and their differentiation by gender, severity of disability, and independent and community living status (Mpofu, 2008); the mechanisms of change or recalibration of values over the rehabilitation period (Schwartz et al., 2004); and defining priority issues in patient-oriented care (Cooper et al., 2003; Swenson et al., 2004). With increased use of values assessment in health and rehabilitation, several important research questions remain to be explored.

Correlates of Value Change in Specific Disability Populations

Rehabilitation client characteristics (e.g., by type of disability) and service context (community setting) influenced observed changes in client values toward health and well-being. For example, clients with community and independent living reported higher adaptive value changes (Mpofu & Herbert, 2006). Patients with progressive physical/neurological disabilities recalibrated their values to emphasize physical rather than mental health functioning (Schwartz et al., 2004). Measures are still to be constructed to assess changes in specific value domains influenced by disability experience. The empirical evidence for the specific progression in value change with acquired or chronic illness or disability is still to be documented.

Research on gender differences in values has produced inconsistent results. Some studies report statistical differences in general values between men and women. The studies that found significant differences generally report that men value materialistic and extrinsic values more than women, who, in turn, endorse more social and intrinsic values (e.g., Beutel & Marini, 1995). Analyzing gender differences in 10 basic values across 70 countries, Schwartz and Rubel (2005) came to the conclusion that men generally score higher on power, stimulation, hedonism, achievement, and self-direction values, whereas the reverse is true for benevolence and universalism values. However, Schwartz and Rubel also noted that gender differences are rather small and typically explain less variance than age and much less than culture. The literature is, however, quite clear on the notion that gender plays a major role in work values, where men were found to be more likely to espouse extrinsic values and women more likely to espouse social values (e.g., Duffy & Sedlacek, 2007a; Hitlin & Piliavin, 2004). It is unclear how gender effects influence disability-related values in rehabilitation clients.

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Studies show that values change over time for different age cohorts. For example, over the period 1952–1970, a change of students' values toward a focus on personal gratification and personal freedom and a weakened sense of social responsibility was observed—but also some return to older values in the early 1980s (Hoge, Hoge, & Wittenberg, 1987). Students' values also appear to have shifted toward private materialism and away from personal self-fulfillment from the early 1970s to the mid-1980s (Easterlin & Crimmins, 1991). Studies concerning the last two decades report that adolescents and college students attributed increasing value to intrinsic and self/actualizing values, while extrinsic and prestige values declined (Duffy & Sedlacek, 2007b; Sinisalo, 2004). The manner in which these age-cohort value changes intersect disability-related values is in need of investigation.

Research confirms the theoretical notion that values and personality traits are two related yet distinct concepts (Olver & Mooradian, 2003). Studies showed that agreeableness correlates most positively with benevolence and tradition values, openness with self-direction and universalism values, extroversion with achievement and stimulation values, and conscientiousness with achievement and conformity values (Roccas, Sagiv, Schwartz, & Knafo, 2002). Values were also shown to predict vocational interests better than basic personality traits (Berings, Fruyt, & Bouwen, 2004). Studies to chart the evolution of adaptive disability-related values within personality types could be helpful to targeted interventions that address personality variables as mediators.

The Mechanisms of Value Change Over the Rehabilitation Period

Several theoretical constructs have been proposed to explain value change over the rehabilitation period. For example, Schwartz and Sprangers (1999) proposed a response-shift characterized by a change of the meaning of one's self-evaluation of a target construct as a result of: (a) a change in the consumer's internal standards (i.e., scale recalibration), (b) a change in the consumer's values (i.e., relative importance of the domains constituting the target construct),

Discussion Box 18.3

GENDER DIFFERENCES IN VALUES

The work of Schwartz and Rubel (2005) across 70 countries isolated some interesting and apparent differences in the predominant personal values of men and women. The basic difference is that men place more emphasis on extrinsic values and women place more emphasis on social values. There is also evidence to suggest that values can change as is evidence by changes in the personal values of Generation X and Generation Y.

Questions:
Given the reported difference in values orientations between males and females, how do you think that these differences will impact upon the nature of the adjustment to disability process for men and women?

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and (c) redefining the target construct or value (i.e., reconceptualization). The specific triggers for such changes in disability-related values and their reliable measurement in rehabilitation and health settings are still a matter for study. The *Thentest* (as previously described) and other self-report approaches are susceptible to memory decay or selective forgetting effects and also social desirability. There is a possibility that patients in their self-evaluation of coping or living with a disability are influenced by self-comparisons, particularly in reference to others with more severe disabilities (e.g., a downward social comparison). These self comparisons may be associated with changes in one's internal standards (e.g., "Although I have a disability, others have more severe disabilities"; Mpofu & Bishop, 2006). The effects of self-comparisons in the construction of personal disability-related values and their reprioritization are unknown.

Measurement Issues

Among the issues that need attention are the identification of appropriate values for assessment in the health and rehabilitation context, instrument and measurement issues including the use of qualitative approaches, and increased attention to the perspective of the health care consumer in instrument development.

Indicators of disability-related values on current surveys (e.g., ADS: Linkowski, 1971; MIQ: Gay et al., 1971) are interpreted without regard of their equivalence in mapping the latent construct of adaptation to disability. However, in reality, clients experiencing negative personal self-worth on one indicator disability value domain (e.g., subordination of physique) may also experience self-efficacy problems in containing the effects of disability to areas in which activity and participation may be objectively constrained. If these indicators of disability-related value statuses are not considered conjointly, using a mathematical measurement model, valuable information for understanding sources of disparities in health care is lost. Item response measurement models (see chapter 5) are useful for constructing measures with conjoint properties, and instruments to enable meaningful aggregation of data from multiple settings are useful for identifying the status and development of adaptive disability-related values (Mpofu & Oakland, 2006).

AQ8

It is also clear from the discussion in this chapter that values may be either general or more narrowly associated with specific life domains (e.g., work values). In the broad context of health, discussions of values and values systems may include both broad values systems and more specific health-related values (e.g., health care values concerning the meanings of pain management, the importance of choice and control, and risk taking in medical decision making; values about the meaning and components of physical and psychological health; or values about body image). Increased attention to the development of health-specific values and value systems and their assessment in rehabilitation and health is necessary. Increased attention to the specificity and sensitivity to changes of values and value assessment instruments in the context of health and rehabilitation is also required.

Theoretical Issues

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E__ Researchers who have explored values change using more general or universal
L__ values systems (such as Rokeach's values system; e.g., Keany & Glueckauf, 1993;

Research Box 18.2

VALUE INFLUENCES ON MEDICAL CONSULTATION

Source: O'Connor, A. M., Wells, G. A., Tugwell, P., Laupacis, A., Elmslie, T., & Drake, E. (1999). The effects of an "explicit" values clarification exercise in a woman's decision aid regarding postmenopausal hormone therapy. *Health Expectations, 2,* 21–32.

Objective: To evaluate the incremental effect of a graphic weigh-scale values clarification exercise to explicitly consider the personal importance of the benefits versus the risks in a woman's decision aid regarding postmenopausal hormone therapy.

Method: Among a sample of 201 women aged 50–69 years from Ottawa, Canada, who had never used hormone therapy, a decision aid including information on the options, benefits, and risks and their probabilities was either followed by: (1) a graphic weigh-scale values clarification exercise to explicitly consider the personal importance of each benefit and risk; or (2) a summary of the main benefits and risks to implicitly consider benefits versus the risks.

AQ9   **Outcome:** Perceived clarity of values, a subscale of the decisional conflict scale; congruence between personal values of benefits and risks (measured on 0–10 importance rating scale) and choices (accept, decline, unsure regarding preventive hormone therapy) using discriminant function analysis.

Results: There were no statistically significant differences between interventions in perceived clarity of values and overall congruence between values and choices. Among those choosing HRT, there was a trend in those exposed to the graphic weigh-scale exercise to have better congruence between values and choices compared to implicit values clarification.

Conclusion: The use of the graphic weigh-scale exercise in a decision aid conveys no overall short-term benefit. Further study is needed to specifically determine effects in those changing the status quo and on the quality of patient–practitioner communication and persistence with decisions.

Questions:
Decision aids are increasingly being used by medical and rehabilitation professionals as a means of assisting patients in making decisions about their treatment. Personal values are consistently identified as a critical element in decision aids. What is not clear is what values are important to include. How should personal values be used to assist patients in evaluating their treatment options?

Aside from the sort of values clarification used in this study, how should "personal values" be defined for this purpose, and how should these values be measured?

What sort of health-related and other values would you consider in making a decision about whether to begin using a potentially effective treatment that also might have risks associated with it?

Persson, Engstrom, Ryden, Larsson, & Sullivan, 2005), have claimed that frequently, value changes failed to occur. This raises the question whether in fact the experience of changing health conditions would cause an individual to change the degree of importance that he or she places on such general values as harmony, knowledge, or comfort (generally no theory-based rationale is suggested for such changes). The sensitivity of measures based on such universal goals to assess changes in health-related values makes such efforts unlikely to produce significant results, particularly in the course of the relatively short amount of time such efforts involve. This example highlights the importance of delineating theoretical postulates in values research, operationalizing values appropriately, and selecting sufficiently sensitive and reliable instruments for values assessment.

Major Issues Requiring Attention in Values Assessment

Many theoretical and practical issues associated with the assessment of values and translating values constructs into health and rehabilitation interventions remain to be resolved. It will be important, as values assessment methods and instruments are continually developed, to explore the appropriateness of different assessment methods and techniques in different clinical and research settings. Issues involved in the accurate, valid, and reliable assessment of values include both methodological and theoretical issues.

The Consumer Perspective in Values Assessment

The ability of rehabilitation and health care professionals to reliably and accurately determine the experience and importance of the consumer's values is inherently limited (Heinemann et al., 1998; Mpofu & Oakland, 2006). Thus, the direct involvement of consumers in the development of values assessment instruments is critical. This approach is consistent with the principles of participatory action research (Walker, 1993) and authentic testing practices (Darling-Hammond, 1994). Some notable examples from the field of HRQoL offer examples of potentially useful models of patient-oriented approaches to values assessment (see previous discussion). The increased use of such approaches, combined with open-ended interviews and decision analytic approaches, would be an important development.

Researchers need to evaluate the benefits and disadvantages of constructing measures of consumer values using items developed by persons with chronic health concerns, illnesses, or disabilities and their families and caregivers, as compared to those items developed and typically used by health professionals. The fact that professionals design measures based on specific theories of values or the need to cover specific health status or service questions makes it unlikely that the resulting measures will be adequate for assessing and comprehensively understanding the experiences of consumers (Mpofu & Oakland, 2006).

Subjective Nature of Values

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Values are dynamic constructs best assessed with measures that combine both qualitative and quantitative approaches (Mpofu & Houston, 1998). Assessment

in rehabilitation and health often includes the use of proxies or caregivers (Heinemann et al., 1998). In using proxies and caregivers, it will be important to use a patient feedback procedure to estimate the extent to which proxy or caregiver information accurately reflects the rehabilitation client's values.

Type of Measures

Values assessment has primarily been conducted through ranking or rating scales, open-ended interviews, check lists, decision analysis, and card-sort methods (Karel, 2000; Karel, Moye, Bank, & Azar, 2007). Most values scales have employed a ranking approach, in which respondents are asked to rank the relative importance of values from a list. Arguments concerning this issue have focused on the relative merits and drawbacks of ranking procedures (Maio et al., 1996). It has been suggested that rankings provide more informative data because they force people to differentiate between similarly regarded values (Maio et al. 1996; Rokeach & Ball-Rokeach, 1989). Using a ratings approach, people may score several values identically, thus, value rankings may have greater predictive validity than value ratings (Maio et al., 1996). Alternately, however, as rankings do not allow people to assign equal importance to different values, the use of rankings may force distinctions that are "arbitrary and unimportant to the person ranking the values, and these arbitrary distinctions might lower the predictive validity of rankings." (Maio et al., p. 172).

To Weight or Not to Weight?

The utility and validity of weighting approaches are related methodological concerns and of significant importance as values about health care are increasingly assessed in the context of health care decision making. Weighting involves the application of an importance scale to values assessment, such that the rater identifies the relative importance of a value by assigning a scaled number to it. Quality of life (QoL) researchers have reported that the practice of importance weighting, typically achieved by multiplying QoL domain ratings by importance ratings, may add little if any sensitivity to a ranking (Cummins, McCabe, Gullone, & Romeo, 1994; Russell, Hubley, Palepu, & Zumbo, 2006; Trauer & Mackinnon, 2001). A number of methodological and theoretical concerns with this approach have also been identified and may, to some extent, account for these findings.

   Methodological limitations of the importance-weighting approach include relatively low reliability, or internal consistency of importance scores, and their low temporal stability—features that have been noted across several studies (Russell et al., 2006). Conceptually, importance itself may be defined by an individual rater in a variety of ways, making its use in this context potentially unreliable unless a specific context for defining importance is provided in the importance scale. It is important from both a theoretical and a practical perspective to further explore these methodological questions.

Summary and Conclusion

Personal values held by the rehabilitation customer influence adaptation to disability and also the perceived efficacy of rehabilitation interventions. The

accurate assessment of rehabilitation client values is important for successful rehabilitation of the client. Yet, there is a paucity of values assessment instruments with evidence for valid use in rehabilitation and health settings.

A majority of extant instruments to assess values have been developed in research settings with typically developing others or nonpatient populations or settings. There is scarce evidence for their use in rehabilitation and health settings. Prospectively, several of these instruments could be studied in rehabilitation and health settings to provide evidence for their potential utility in those settings. Extant value assessment instruments are based on value models that are developed in occupational or education settings rather than in rehabilitation and health settings. Consequently, they are short of health-related values, and efforts to use instruments developed in nonhealth settings will need to address the limitations in their conceptual frameworks to extend these to address pertinent values with chronic illness or disease.

The topic of value change also relates to the question of whether values can be changed intentionally through systematic interventions. Unfortunately, not many evaluation studies exist to prove such effects. However, the existing literature shows that because values are often simply truisms (Maio & Olson, 1998), values can indeed be changed if they are directly confronted and questioned about their reasons and their adaptability (Bernard, Maio, & Olson, 2003). Instruments that can reliably measure value change over the rehabilitation or health care period are an important priority in values assessment. Where qualitative approaches are used to assess values in rehabilitation and health care, the reliability and psychometric adequacy of qualitative measures will need to be established with the same rigor that is used in the development and use of quantitative measures (Mpofu & Oakland, 2006). Due care in the construction and design of qualitative and combined approaches to values assessment for use in rehabilitation and health care settings is critical.

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