# Job Functions and Knowledge Requirements of Certified Rehabilitation Counselors in the 21st Century

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The practice of rehabilitation counselors has been affected by significant changes in rehabilitation counseling practice settings and service delivery systems, evolving federal legislative mandates, and the licensure movement in the field of counseling. The purpose of this study was to identify and examine the major knowledge domains and job functions required for rehabilitation counseling practice in today's rapidly changing practice environment. Results revealed seven job functions (vocational counseling and consultation, counseling intervention, community-based rehabilitation service activities, case management, applied research, assessment, and professional advocacy) and six knowledge domains (career counseling, assessment, and consultation; counseling theories, techniques, and applications; rehabilitation services and resources; case and caseload management; health care and disability systems; and medical, functional, and environmental implications of disability). Participants' ratings of the importance of job functions and knowledge domains and implications for practice are also discussed.

Most would agree that over the past 10 years there have been significant changes in the delivery of rehabilitation counseling services in this country in response to evolving federal legislative mandates (e.g., Rehabilitation Act Amendments of 1998), changes in state workers' compensation laws, generation of new knowledge, and changes in the larger business and economic communities. Nearly every practice setting where rehabilitation counseling services are provided (public, private for-profit, community-based rehabilitation organizations, etc.) is simultaneously undergoing significant change in the way that services are delivered to persons with disabilities and experiencing the emergence of new knowledge and skill requirements for practitioners who deliver these services. Recently, the rehabilitation counseling profession has been further challenged by changes in both the managed care movement in health care and the licensure movement in counseling.

These specific changes, in combination with anticipated societal and professional trends affecting rehabilitation counseling (Hershenson & McKenna, 1998) and the counseling role in general (Herr, 1999), provide a dynamic context for the further development of the profession in these early years of the 21st century. Although most professionals would agree that change has been a constant force in recent years, there is less consensus about how these recent changes have affected the daily practice of rehabilitation counselors in the various settings in which they work in terms of the job functions they perform and the knowledge they are required to possess.

Over the past 45 years, an extensive body of knowledge has been acquired through various research methods (e.g., job analysis, role and function, professional competency, and critical incident approaches) that have empirically identified and defined the specific competencies and job functions important to the practice of rehabilitation counseling and to the achievement of positive outcomes with the consumers they serve (Berven, 1979; Emener & Rubin, 1980; Harrison & Lee, 1979; Jaques,

1959; Leahy, Shapson, & Wright, 1987; Leahy, Szymanski, & Linkowski, 1993; Muthard & Salamone, 1969; Rubin et al., 1984; Wright & Fraser, 1975). In terms of using and applying research, these descriptions of the rehabilitation counselor's role, function and required knowledge, and skill competencies have assisted the profession in a number of important ways. First, they have helped define the professional identity of the rehabilitation counselor by empirically defining the uniqueness of the profession, providing evidence in support of the construct validity of its knowledge base, and providing an empirical basis for the development and refinement of the profession's scope of practice. Second, the descriptions have been extensively used in the development of preservice educational curricula in order to provide graduate training in areas of knowledge and skill critical to the practice of rehabilitation counseling across major employment settings. Third, the long-standing emphasis on a research-based foundation to practice has contributed to the rehabilitation counseling profession's leadership role in the establishment and ongoing refinement of graduate educational program accreditation (through the Council on Rehabilitation Education [CORE]) and individual practitioner certification (through the Commission on Rehabilitation Counselor Certification [CRCC]; Leahy, 1997). These data were specifically used to establish and validate educational standards that are applied in the accreditation process for individual academic programs and to establish the test specifications that are used to guide the certification examination process for individual practitioners.

Most recently, Leahy et al. (1993) surveyed certified rehabilitation counselors (CRCs) to examine their perceived importance of knowledge domains underlying the credentialing of rehabilitation counselors. They found 10 common core knowledge areas that are important to the contemporary practice of rehabilitation counseling: vocational counseling and consultation services; medical and psychosocial aspects of disability; individual and group counseling; program evaluation and research; case management and service coordination; family, gender, and multicultural issues; foundations of rehabilitation; worker's compensation; environment and attitude barriers; and assessment. These data were used to guide decisions by CORE in relation to educational standards revision and were specifically used by CRCC to set the new examination specifications, which are still in place today.

Since the publication of Leahy et al.'s (1993) study, 48 states have developed generic counselor licensure laws. Many rehabilitation counselors in the field have voiced their concerns about licensure issues, suggesting that rehabilitation counselors be recognized for their expertise in mental health and substance abuse, as their practice includes counseling in these areas as well. There have also been significant changes in federal policy affecting the delivery of services in the public rehabilitation program and the settings in which these services are provided (e.g., one-stop delivery systems established under the Workforce Investment Act of 1998), and new opportunities for rehabilitation professionals have been emerging (e.g., benefits counseling, life care planning, transition services, mental health services). Private sector rehabilitation has also undergone significant changes. After years of experimenting with mandatory rehabilitation in the arena of workers' compensation, vocational rehabilitation is viewed by some as an ineffective cost driver (Habeck, 1996). As a result, many states have curtailed the provision of rehabilitation services to workers with disabilities. In contrast, disability management has gained popularity in recent years (Chan & Leahy, 1999; Chan et al., 2000). For example, in 1999, the Washington Business Group on Health conducted a survey of disability management practices involving 178 companies with 1,000 or more employees; the results revealed that virtually all these companies have in place some disability management components to deal with work injury issues in the workplace (McMahon et al., 2000). Rehabilitation counselors in the private sector are increasingly practicing in integrated disability management settings.

As a result of these changes, and because the accreditation body of CRCC requires periodic study and review of the test specifications used to guide the certification examination process of the credentialing bodies, we decided to undertake the present study. This study, which was sponsored by the CRCC, was designed to examine the work roles and knowledge requirements of rehabilitation counselors in today's rapidly changing practice environments. The findings and specific data from this study will be used by the CRCC to examine and set test specifications for future versions of the CRC examination. These findings may also be used by the profession to update the official scope-of-practice statement, by educators to refine preservice curriculums, and by CORE to validate and revise the educational standards applied in accreditation decisions.

The research design for the present study includes both descriptive and ex post facto approaches. The descriptive approach involves the use of principal axis factor analysis (also known as common factor analysis) as a data reduction technique to examine the factor structure underlying major job functions and knowledge domains essential to the practice of rehabilitation counseling. The ex post facto portion of the study includes comparisons of factor scores across a number of employment (practice) settings. The research questions addressed in the study were as follows:

1. What major job functions are perceived by CRCs as important for effective rehabilitation counseling practice?

2. What knowledge areas are perceived by CRCs as important for effective rehabilitation counseling practice?
3. Do CRCs from different practice settings differ in their perceptions of the relative importance of different rehabilitation counseling job functions and knowledge areas required for clinical practice?

# Method

## Participants

Because the major focus of this study is on the work behavior of CRCs, data used in this study were obtained from two samples of 10% of the CRC database. Participants from the first sample received research packets containing the job-task questionnaires (*Rehabilitation Skills Inventory–Revised* [RSI-R; Leahy, Chan, & Saunders, 2001]), and participants from the second sample were asked to respond to the knowledge requirement questionnaires (*Knowledge Validation Inventory–Revised* [KVI-R; Leahy, Chan, & Saunders, 2001]). The respondents received three continuing education credits for participating in the study.

From the target sample of 1,400 CRCs, 631 participants completed the knowledge questionnaires. The overall response rate was 45%. The respondents were 64% women and 36% men, with an average of 8.89 (*SD* = 7.86) years of experience in their current employment settings. The mean age of the participants was 45.48 (*SD* = 9.96). The majority of the respondents identified themselves as Caucasian/Non-Hispanic (90%); the remainder of the sample broke out as follows: 3% African American, 2% Latino, 1% Native American, 1% Asian American, and 3% other. The majority of the respondents hold the title of rehabilitation counselor (38%), followed by administrator/manager (10%), case manager (9%), supervisor (9%), vocational evaluator (3%), and rehabilitation educator (3%), with the remaining 28% represented by job placement specialists, work adjustment specialists, rehabilitation nurses, substance abuse counselors, independent living specialists, social workers, and a range of job titles listed in the "other" category. The most frequent work settings reported by the participants were federal–state rehabilitation agencies (22%), proprietary rehabilitation companies (17%), private practices (11%), private nonprofit rehabilitation facilities/organizations (11%), colleges or universities (7%), insurance companies (5%), and medical centers or general hospitals (4%), with the remaining 23% represented by a range of job settings reported in the "other" category.

For the job task sample, 550 out of 1,400 CRCs completed the job task questionnaires, with a response rate of 39%. The respondents were 67% women and 33% men, with an average of 8.87 (*SD* = 7.76) years of experience in their current employment settings. The mean age of the participants was 44.71 (*SD* = 10.10). The majority of the respondents identified themselves as Caucasian/Non-Hispanic (89%); the remainder of the participants identified themselves as follows: 5% African American, 2% Latino, 2% Asian American, 1% Native American, and 1% other. The majority of the respondents hold the title of rehabilitation counselor (37%), followed by administrator/manager (10%), supervisor (10%), case manager (9%), and rehabilitation educator (3%). The most frequent work settings reported by the participants were federal–state rehabilitation agencies (21%), proprietary rehabilitation companies (20%), private nonprofit rehabilitation facilities/organizations (11%), private practices (10%), colleges or universities (9%), medical centers or general hospitals (4%), mental health centers (4%), and private practices (3%), with the remaining 18% represented by a range of job settings reported in the "other" category. As can be observed, the two research samples are comparable in terms of their demographic characteristics and representative of the population of CRCs from which the sample was randomly selected.

## Instruments

The *Knowledge Validation Inventory* (KVI; Leahy et al., 1993) and the *Rehabilitation Skills Inventory* (RSI; Leahy et al., 1987) were both revised and used in this study. In order to validate existing items and identify emerging knowledge areas and functions not represented in the original instruments, 47 content experts were selected to participate as Delphi panelists to provide responses to either the KVI or the RSI and to provide suggestions for additional items. These experts were commissioners or committee members of the Commission on Rehabilitation Counselor Certification, the Commission for Case Manager Certification, and the Certified Disability Management Specialists Commission. A demographic questionnaire was also developed for this study and used to identify demographic information useful for sample description and examine possible differences among various groups.

**Knowledge Validation Inventory–Revised.** The KVI, which was originally developed from existing CRCC examination content areas and CORE curricular standards (Leahy et al., 1993), assesses the importance of knowledge areas to respondents' in their role as rehabilitation counselor in the settings in which they work and the degree of preparedness they feel they have in this area or standard as a result of their education and training. After carefully reviewing the responses of the Delphi panelists and the existing literature, including counselor li-

censure standards, CORE, and the standards of the Council on Accreditation of Counseling and Related Educational Programs, the KVI was revised to include an additional 38 items.

The *Knowledge Validation Inventory–Revised* is a 96-item survey questionnaire that uses two 5-point Likert-type scales to assess the importance of and preparedness for each knowledge item. Respondents were asked to rate the importance of each knowledge area using a 5-point Likert scale (0 = *not important*, 1 = *somewhat important*, 2 = *important*, 3 = *very important*, and 4 = *extremely important*). To assess levels of perceived preparedness, respondents were asked to rate the degree of preparation they believed they had received in each knowledge area through their education and training, using a 5-point Likert scale (0 = *no preparation*, 1 = *little preparation*, 2 = *moderate preparation*, 3 = *high degree of preparation*, and 4 = *very high degree of preparation*). The preparation scale was not used in this study but in a separate study to examine the training needs of CRCs.

**Rehabilitation Skills Inventory–Revised.** Leahy et al. (1987) originally developed the RSI, a 114-item questionnaire designed to assess the importance of specific job tasks and professional functions in relation to the respondent's role as a rehabilitation counselor in his or her work setting. In addition, the original instrument included a second scale that was designed to assess the respondent's attainment level for each of the competency areas. Our preliminary review of the instrument led to the elimination of 12 items that were intended to assess tasks related to the function of the vocational evaluator in the original research. We also eliminated the attainment scale because the KVI-R was used to assess that dimension in this study. After carefully reviewing the responses of the Delphi panelists and the existing literature, we revised the RSI to include an additional 18 items. In addition, we changed the wording of three original items to reflect more current terminology (e.g., addition of O*NET as a job classification system). We also added a frequency scale to assess how frequently the respondent performs each task.

The *Rehabilitation Skills Inventory–Revised* is a 120-item questionnaire that uses two 5-point Likert-type scales to assess the importance and frequency of each job task item. Respondents were asked to rate the importance of each job task item using a 5-point Likert scale (0 = *not important*, 1 = *somewhat important*, 2 = *important*, 3 = *very important*, and 4 = *extremely important*). The respondents were also asked to rate the frequency with which they perform each task, taking into account all of the things they do over the course of the year in their work settings, using a 5-point Likert scale (0 = *not at all*, 1 = *very infrequently*, 2 = *somewhat frequently*, 3 = *very frequently*, and 4 = *most of the time*).

Although the RSI and the KVI have been used previously for this type of research, the revised versions of these instruments contain a number of new items representing evolving content relevant to rehabilitation counseling practice.

# Results

## *Major Job Functions*

In the language of job analysis, a job dimension is a collection of work behaviors or tasks with a common theme or purpose. A job can typically be described in between 5 and 10 job dimensions, and the job dimension approach to job analysis is most closely akin to the identification of essential functions (Ziemba & McMahon, 1992). In this study, the terms *job dimension* and *job function* are used interchangeably.

To derive the major job dimensions of CRCs, a principal axis factor analysis (also known as common factor analysis) was performed based on the 120 job task items from the RSI-R. Common factor analysis techniques were preferred over principal component analysis because recent research (c.f. Clark & Watson, 1995; Floyd & Widaman, 1995) has indicated that factor loading estimates based on common factor analysis generalize well to those estimates observed using confirmatory factor analytic techniques. Common factor analysis also produces more accurate final estimates of commonality than does principal components analysis. In their article summarizing guidelines for using factor analysis in the development and refinement of measuring instruments, Floyd and Widaman (1995) stated, that "Clearly, common factor analysis techniques should be strongly preferred over component analysis techniques for most research applications that attempt to understand a domain of phenomena in terms of a smaller number of underlying, latent variables" (p. 291).

Traditionally, the guiding principle used to determine sample size for factor analysis has focused solely on the participant-to-variable ratio. For example, Thorndike (1982) recommended a minimum of 10 participants per variable for factor analysis. Recently, Guadagnoli and Velicer (1988; cited in Floyd & Widaman, 1995) challenged such rules and argued that no sound theoretical or empirical basis exists for this across-the-board participant-to-variable ratio recommendation. Their Monte Carlo study suggested that the magnitude of the factor loadings, the number of items per factor, and the total sample size were all important in determining the stability of the factor solutions. Specifically, they reported that with at least 10 variables loaded in the .40 range on each factor, samples as small as 150 participants produced accurate and stable solutions. In general, however, they recommended

that samples of 300 to 400 participants be used when factor loadings are in the .40 range. In this study, the use of data from 631 and 550 CRCs to analyze rehabilitation counseling job functions and knowledge requirements, respectively, is deemed sufficient for factor analysis.

We first used the Kaiser-Guttman rule (i.e., eigenvalue greater than 1) to determine the number of factors to be retained. A 16-factor solution was indicated with several trivial factors toward the end. We then used Cattell's scree test as an alternative to determine the number of factors to be retained (Cattell, 1966; Gorsuch, 1983). This time, a seven-factor solution was indicated. To ensure that no meaningful solution was overlooked, both eight- and six-factor solutions were rotated and examined using the varimax method. The resulting seven-factor solution, which accounted for 59% of the total variance, was judged to be superior by virtue of parsimony and ease of interpretation. Next, items with factor loadings equal to or greater than .35 were retained for further analyses. Additional items were eliminated on the basis of item analysis results (e.g., item/subscale correlations, item/total correlations). The seven major rehabilitation counseling job dimensions and the mean importance rating for each job dimension and job-task item are presented in Table 1.

**Factor 1: Vocational Counseling and Consultation.** This function consisted of 43 job-task items, and a subsequent factor analysis of these items suggested that they can be grouped into four subfactors: (a) job development and placement, (b) career counseling, (c) employer consultation, and (d) vocational planning and assessment. The coefficient alpha computed for the total sample was .98 and the average interitem correlation was .55, indicating high internal consistency of the items constituting this factor. The mean perceived importance rating for this factor was 2.50 (*SD* = 1.03).

**Factor 2: Counseling Intervention.** This function consisted of 28 job-task items that are representative of counseling intervention activities. Subsequent factor analysis of these 28 items revealed the items can be further organized as (a) providing individual, group, and family counseling; (b) building consumer–counselor working relationships; and (c) helping consumers cope with specific psychosocial issues related to disabilities. Clark and Watson (1995) stated that "as the number of items become quite large, it is exceedingly difficult to avoid achieving a high reliability estimate. Cortina (1993), in fact, suggested that coefficient alpha is virtually useless as an index of internal consistency for scales containing 40 or more items" (p. 316). Clark and Watson further recommended that the average interitem correlation should fall in the range of .40 to .50 for factors representing a specific domain with 15 or more items. For this factor, the coefficient alpha computed for the total sample was .96 and the average interitem correlation was .45, indicating high internal consistency of the items constituting this factor. The mean perceived importance rating for this factor was 2.58 (*SD* = .83).

**Factor 3: Community-Based Rehabilitation Service.** This function was composed of 16 job-task items that represent activities such as researching resources and funding available in the community for consumers, advocating for consumers and their families, providing benefits counseling, and marketing rehabilitation services to the community. The coefficient alpha computed for the total sample was .93, and the average interitem correlation was .44, indicating high internal consistency of the items constituting this factor. The mean perceived importance rating for this factor was 2.15 (*SD* = .94).

**Factor 4: Case Management.** This function was composed of 19 job-task items focusing on case and caseload management activities such as obtaining written reports regarding client progress, developing rapport/referral network with physicians and other rehabilitation health professionals, reporting to referral sources regarding the progress of cases, and making financial decisions regarding caseload management. The coefficient alpha computed for the total sample was .92, and the average interitem correlation was .39, indicating high internal consistency of the items constituting this factor. The mean perceived importance rating for this factor was 3.07 (*SD* = .74).

**Factor 5: Applied Research.** This function consisted of six job-task items. Three items focus on applying research skills to professional practice (e.g., review clinical rehabilitation literature regarding a given topic or case problem, obtain current business and labor market information from professional journals), and three are related to giving vocational expert testimony and may require obtaining up-to-date business, labor market, and medical information. The coefficient alpha computed for the total sample was .83, indicating high internal consistency of the items constituting this factor. The mean perceived importance rating for this factor was 2.00 (*SD* = 1.09).

**Factor 6: Assessment.** This function consisted of three job-task items that focus on actual assessment activities, such as selecting and administering standardized tests and conducting ecological assessments. These activities are somewhat different than related assessment tasks, included in Factor 1, that focus on obtaining, interpreting, and synthesizing assessment information for rehabilitation planning and counseling interventions. The coefficient alpha computed for the total sample was .69, indicating moderately high internal consistency of the

**TABLE 1. Major Job Functions Related to Rehabilitation Counseling Practice**

| Major job function | *M* | *SD* |
|---|---|---|
| **Factor 1: Providing Vocational Counseling and Consultations** | ***2.50*** | ***1.03*** |
| ***Subfactor A–Job Development and Placement*** | ***2.45*** | ***1.11*** |
| Conduct labor market analyses (113) | 2.02 | 1.48 |
| Use occupational information such as the DOT[a], OOH[b], and other publications (65) | 2.24 | 1.42 |
| Classify local jobs using the DOT and O*Net or other classification systems (62) | 1.92 | 1.47 |
| Discuss return-to-work options with the employer (103) | 2.37 | 1.47 |
| Obtain a release for a return to work from the treating physician (104) | 2.53 | 1.53 |
| Document all significant client vocational findings sufficient for legal testimony or records (87) | 2.64 | 1.45 |
| Analyze the tasks of a job (61) | 2.58 | 1.38 |
| Apply labor market information that influences the task of locating, obtaining, and progressing employment (56) | 2.28 | 1.41 |
| Review medical information with clients to determine vocational implications of their functional limitations (41) | 2.81 | 1.32 |
| Identify transferable work skills by analyzing clients' work history and functional assets and limitations (6) | 3.10 | 1.27 |
| Coordinate "work conditioning" or work hardening services (118) | 1.85 | 1.35 |
| Assess clients' readiness for gainful employment (7) 3.09 | 1.32 | |
| ***Subfactor B–Career Counseling*** | ***2.74*** | ***1.11*** |
| Counsel clients on selecting jobs consistent with their abilities, interests, and rehabilitation goals (43) | 3.10 | 1.29 |
| Discuss clients' vocational plans when they appear unrealistic (47) | 3.02 | 1.25 |
| Instruct clients in developing systematic job search skills (51) | 2.53 | 1.35 |
| Develop mutually agreed upon vocational counseling goals (48) | 2.76 | 1.42 |
| Instruct clients in preparing for the job interview (e.g., job application, résumé preparation, attire, interviewing skills) (52) | 2.73 | 1.36 |
| Use supportive counseling techniques to prepare clients for the stress of the job search (50) | 2.54 | 1.25 |
| Recommend occupational and/or educational materials for clients to explore vocational alternatives and choices (44) | 2.66 | 1.29 |
| Discuss with clients labor market conditions that may influence the feasibility of entering certain occupations (46) | 2.66 | 1.37 |
| Counsel clients on educational and vocational implications of test and interview information (42) | 2.75 | 1.27 |
| Inform clients of job openings suitable to their needs and abilities (59) | 2.59 | 1.48 |
| Identify and arrange for functional or skill remediation services for clients' successful job placements (49) | 2.29 | 1.38 |
| Use local resources to assist with placement (e.g., employer contacts, colleagues, state employment service) (57) | 2.71 | 1.42 |
| Help clients prepare their rehabilitation plans with mutually agreed upon interventions and goals (26) | 3.17 | 1.20 |
| Identify educational and training requirements for specific jobs (60) | 2.70 | 1.32 |
| ***Subfactor C–Employer Consultation*** | ***2.27*** | ***1.13*** |
| Provide consultation to employers regarding accessibility and issues related to compliance to the Americans with Disabilities Act (ADA) (71) | 2.12 | 1.45 |
| Respond to employer biases and concerns regarding hiring persons with disabilities (68) | 2.55 | 1.38 |
| Provide prospective employers with appropriate information on clients' work skills and abilities (70) | 2.35 | 1.46 |
| Negotiate with employers or labor union representatives to reinstate/rehire an injured worker (69) | 2.05 | 1.48 |
| Apply knowledge of assistive technology in job accommodation (64) | 2.32 | 1.38 |
| Monitor clients' postemployment adjustment to determine need for additional services (55) | 2.24 | 1.48 |
| Recommend modifications of job tasks to accommodate clients' functional limitations using ergonomic principles (63) | 2.38 | 1.38 |
| Determine the level of intervention necessary for job placement (e.g., job club, supported work, on-the-job training) (66) | 2.43 | 1.44 |
| Understand the applications of current legislation affecting the employment of individuals with disabilities (e.g., ADA) (67) | 2.77 | 1.23 |
| Develop acceptable client work behavior through the use of behavioral techniques (53) | 2.02 | 1.31 |
| Use computerized systems for job placement assistance (58) | 1.79 | 1.40 |
| ***Subfactor D–Vocational Planning*** | ***2.44*** | ***1.04*** |
| Match client needs with job reinforcers and client aptitudes with job requirements (15) | 2.52 | 1.34 |
| Use behavioral observations to make inferences about work personality characteristics and adjustment (13) | 2.41 | 1.24 |
| Make logical job, work area, or adjustment training recommendations based on comprehensive client assessment information (16) | 2.62 | 1.32 |

*(table continues)*

*(Table 1 continued)*

| Major job function | *M* | *SD* |
|---|---|---|
| Identify client work personality characteristics to be observed through an on-the-job evaluation or simulated work situation (12) | 2.01 | 1.36 |
| Integrate assessment data to describe clients' assets, limitations, and preferences for rehabilitation planning purposes (14) | 2.89 | 1.20 |
| Interpret test and ecological assessment outcomes to clients and others (11) | 2.19 | 1.35 |
| **Factor 2: Conducting Counseling Interventions** | **2.58** | **.83** |
| ***Subfactor A–Individual, Group, and Family Counseling*** | ***2.18*** | ***.96*** |
| Counsel clients using group methods (40) | 1.44 | 1.31 |
| Counsel a client's family on providing information and supporting positive coping behaviors (38) | 2.09 | 1.29 |
| Counsel clients regarding sexual concerns related to the presence of a disability (39) | 1.54 | 1.27 |
| Explore clients' needs for individual, group, or family counseling (31) | 2.25 | 1.26 |
| Assist clients in verbalizing specific behavioral goals for personal adjustment (30) | 2.39 | 1.24 |
| Assist clients in understanding stress and in using coping mechanisms (37) | 2.49 | 1.18 |
| Use behavioral techniques such as shaping, rehearsal, modeling, and contingency management (36) | 1.97 | 1.30 |
| Teach problem-solving skills to clients (119) | 2.63 | 1.21 |
| Obtain regular client feedback regarding the satisfaction with services delivered and suggestions for improvement (102) | 2.82 | 1.13 |
| ***Subfactor B–Counseling Relationship*** | ***3.00*** | ***.86*** |
| Develop a therapeutic relationship characterized by empathy and positive regard for clients (17) | 3.41 | .99 |
| Adjust counseling approaches or styles according to client cognitive and personality characteristics (20) | 3.20 | 1.10 |
| Clarify for clients mutual expectations and the nature of the counseling relationship (18) | 3.21 | 1.12 |
| Employ counseling techniques (e.g., reflection, interpretation, summarization) to facilitate client self-exploration (23) | 2.81 | 1.24 |
| Identify one's own biases and weaknesses that may affect the development of healthy client relationships (19) | 2.98 | 1.22 |
| Assist clients in terminating counseling in a positive manner and thus enhance their ability to function independently (27) | 2.66 | 1.34 |
| Identify social, economic, and environmental forces that may present barriers to clients' rehabilitation (24) | 3.22 | 1.00 |
| Apply psychological and social theory to develop strategies for rehabilitation intervention (22) | 2.28 | 1.25 |
| Recognize psychological problems (e.g., depression, suicidal ideation) requiring consultation or referral (28) | 3.34 | 1.02 |
| ***Subfactor C–Counseling Techniques*** | ***2.55*** | ***.86*** |
| Interpret diagnostic information to clients (e.g., tests, vocational and educational records, medical reports) (21) | 2.79 | 1.19 |
| Explain the services and limitations of various community resources to clients (84) | 2.59 | 1.17 |
| Assist clients in modifying their lifestyles to accommodate functional limitations (32) | 2.35 | 1.22 |
| Provide information to help clients answer other individuals' questions about their disabilities (34) | 2.38 | 1.23 |
| Counsel clients on appreciating and emphasizing their personal assets (33) | 2.86 | 1.16 |
| Counsel clients on identifying emotional reactions to disability (29) | 2.66 | 1.22 |
| Use assessment information to provide clients with insights into personal dynamics (25) | 2.32 | 1.26 |
| Confront clients with observations about inconsistencies between their goals and their behaviors (35) | 2.80 | 1.11 |
| Determine clients' abilities to perform independent living activities (5) | 2.35 | 1.28 |
| Use behavioral observations to make inferences about work personality characteristics and adjustment (13) | 2.41 | 1.24 |
| **Factor 3: Using Community-Based Rehabilitation Services** | ***2.15*** | ***.94*** |
| Research and secure funding, community resources, and support needed for community re-entry (108) | 1.80 | 1.41 |
| Promote public awareness and legislative support of rehabilitation programs (100) | 2.17 | 1.36 |
| Perform supported-employment–related activities (120) | 1.80 | 1.44 |
| Work advocacy groups to promote rehabilitation programs (99) | 2.13 | 1.33 |
| Teach clients' co-workers/supervisors about work and disability issues (112) | 2.07 | 1.41 |
| Evaluate and select facilities that provide specialized care services for clients (109) | 2.13 | 1.34 |
| Act as an advocate for the client and family with third-party payors and service providers (107) | 2.12 | 1.37 |
| Contact vendors in order to purchase adaptive/accommodative equipment (110) | 1.98 | 1.37 |
| Conduct group activities and programs such as job clubs, vocational exploration groups, or job-seeking skills groups (54) | 1.64 | 1.42 |
| Describe Social Security regulations and procedures for disability determination and benefits (76) | 1.79 | 1.38 |
| Market rehabilitation services to businesses and organizations (90) | 2.07 | 1.42 |
| Attend team conferences (106) | 2.73 | 1.19 |
| Supervise new counselors and/or graduate students in rehabilitation counseling activities (45) | 2.19 | 1.53 |

*(table continues)*

*(Table 1 continued)*

| Major job function | *M* | *SD* |
|---|---|---|
| Negotiate financial responsibilities with the referral source and/or sponsor for a client's rehabilitation (89) | 2.06 | 1.40 |
| Provide information regarding your organization's programs to current and potential referral sources (74) | 2.68 | 1.26 |
| Interpret your organization's policy and regulations to clients and others (98) | 2.84 | 1.21 |
| **Factor 4: Managing Cases** | **3.07** | **.74** |
| Compile and interpret client information to maintain a current case record (85) | 3.26 | 1.01 |
| Perform caseload management activities (116) | 3.10 | 1.16 |
| Consult with medical professionals about functional capacities, prognosis, and treatment plans for clients (80) | 3.00 | 1.21 |
| Obtain written reports regarding client progress (105) | 2.85 | 1.26 |
| Collaborate with other providers so that services are coordinated, appropriate, and timely (79) | 3.15 | 1.07 |
| Write case notes, summaries, and reports so that others can understand the case (86) | 3.45 | .94 |
| Determine and monitor individual case management outcomes (111) | 2.81 | 1.26 |
| Monitor client progress (78) | 3.42 | .99 |
| State clearly the nature of the clients' problems for referral to service providers (83) | 2.92 | 1.18 |
| Develop rapport/network with physicians and other rehabilitation professionals (117) | 3.14 | 1.02 |
| Use effective conflict resolution strategies when providing case management services (114) | 2.55 | 1.24 |
| Report to referral sources regarding progress of cases (77) | 2.77 | 1.27 |
| Make sound and timely financial decisions within the context of caseload management in your work setting (88) | 2.60 | 1.42 |
| Coordinate activities of all agencies involved in a rehabilitation plan (75) | 2.63 | 1.32 |
| Interview the client to collect and verify the accuracy of case information (2) | 3.29 | 1.08 |
| Refer clients to appropriate specialists and/or for special services (82) | 2.74 | 1.16 |
| Use effective time management strategies (115) | 3.30 | .96 |
| Abide by ethical and legal considerations of case communication and recording (e.g., confidentiality) (92) | 3.76 | .68 |
| Assess the significance of clients' disabilities in consideration of medical, psychological, educational, and social support status (1) | 3.51 | .89 |
| **Factor 5: Applying Research to Practice** | **2.00** | **1.09** |
| Understand insurance claims processing and professional responsibilities in workers' compensation (81) | 2.08 | 1.52 |
| Provide expert opinion or testimony regarding employability and rehabilitation feasibility (73) | 1.91 | 1.47 |
| Serve as a vocational expert to public agencies, law firms, and/or private businesses (72) | 1.94 | 1.49 |
| Apply published research results to professional practice (95) | 1.97 | 1.27 |
| Conduct a review of the rehabilitation literature on a given topic or case problem (94) | 2.07 | 1.27 |
| Read professional literature related to business, labor markets, medicine, and rehabilitation (93) | 2.85 | 1.02 |
| **Factor 6: Conducting Assessments** | **2.27** | **1.00** |
| Select evaluation instruments and strategies according to their appropriateness and usefulness for a particular client (8) | 2.37 | 1.29 |
| Administer appropriate standardized tests and ecological assessment techniques (10) | 1.72 | 1.32 |
| Determine appropriate community services for clients' stated needs (4) | 2.71 | 1.18 |
| **Factor 7: Practicing Professional Advocacy** | **2.69** | **1.01** |
| Apply principles of rehabilitation legislation to daily practice (96) | 2.57 | 1.27 |
| Identify and challenge stereotypic views toward persons with disabilities (101) | 2.88 | 1.22 |
| Educate clients regarding their rights under federal and state law (97 | 2.68 | 1.22 |

*Note*. The numbers in parentheses following each statement are the item numbers from the original instrument.
[a]DOT = *Dictionary of Occupational Titles*. [b]OOH = *Occupational Outlook Handbook*.

items constituting this factor. The mean perceived importance rating for this factor was 2.27 (*SD* = 1.00).

**Factor 7: Professional Advocacy.** This function consisted of three job-task items that focus on applying disability-related policy and legislation to daily rehabilitation practices. The coefficient alpha computed for the total sample was .76, indicating moderately high internal consistency of the items constituting this factor. The mean perceived importance rating for this factor was 2.69 (*SD* = 1.01).

**Summary.** Certified rehabilitation counselors in this study rated all major job functions as important (i.e., a rating of 2 or above). In terms of relative importance, case management, with a mean rating of 3.07, was viewed

by counselors as their most important job function. Professional advocacy (M = 2.69) was the second most important job function. Professional advocacy along with counseling (M = 2.58) and vocational consultation (M = 2.50), were also rated as important to very important job functions. Community-based rehabilitation services (M = 2.15), assessment (M = 2,27), and applied research (M = 2.00) were all rated as important job functions.

For each of the items in the RSI-R, respondents were asked to indicate how frequently they performed each task. The most frequently performed job function is case management (M = 2.77), followed by advocacy (M = 2.36), counseling (M = 2.15), vocational consultation (M = 1.96), assessment (M = 1,83), utilization of community-based rehabilitation services (M = 1.58), and applied research (M = 1.46).

## *Major Knowledge Domains*

A principal axis factor analysis of the knowledge items yielded six knowledge domains important to rehabilitation counseling practice. The six-factor solution accounted for 51% of the variance. The six knowledge domains and the mean importance rating for each knowledge item are presented in Table 2.

**Factor 1: Career Counseling, Assessment, and Consultation Services.** This factor consisted of 29 knowledge items, and a subsequent factor analysis of these items yielded three subfactors: (a) vocational consultation and employer services, (b) job development and placement services, and (c) career counseling and assessment techniques. The coefficient alpha computed for the total sample was .96 and the average interitem correlation was .45, indicating high internal consistency of the items constituting this factor. The mean perceived importance rating for this factor was 2.67 (*SD* = .79).

**Factor 2: Counseling Theories, Techniques, and Applications.** This factor was composed of 27 knowledge items that are important to counseling intervention activities. A subsequent factor analysis of these 27 items revealed the following subcategories: (a) mental health counseling; (b) group and family counseling; (c) individual counseling; (d) psychosocial and cultural issues in counseling; and (e) foundations, ethics, and professional issues in rehabilitation counseling. The coefficient alpha computed for the total sample was .94 and the average interitem correlation was .36, indicating high internal consistency of the items constituting this factor. The mean perceived importance rating for this factor was 2.40 (*SD* = .68).

**Factor 3: Rehabilitation Services and Resources.** This factor comprised 12 knowledge items that represented knowledge related to supported employment and school-to-work transitions, independent living, benefits counseling, health care and rehabilitation systems, and other community resources. The coefficient alpha computed for the total sample was .88, indicating high internal consistency of the items constituting this factor. The mean perceived importance rating for this factor was 2.60 (*SD* = .73).

**Factor 4: Case and Caseload Management.** This factor consisted of eight knowledge items related to theories and techniques of case and caseload management, such as principles of caseload management, clinical problem-solving skills, case recording and documentation, interdisciplinary team work, and conflict resolution strategies. The coefficient alpha computed for the total sample was .83, indicating high internal consistency of the items constituting this factor. The mean perceived importance rating for this factor was 3.10 (*SD* = .66).

**Factor 5: Health Care and Disability Systems.** This factor contained 10 knowledge items that represent knowledge required to perform rehabilitation case management functions in integrated disability management systems. As such, rehabilitation counselors must be familiar with rehabilitation processes in both the health care and workers' compensation systems. The coefficient alpha computed for the total sample was .87, indicating high internal consistency of the items constituting this factor. The mean perceived importance rating for this factor was 2.24 (*SD* = .85).

**Factor 6: Medical, Functional, and Environmental Implications of Disability.** This factor had eight items focusing on medical and functional limitations of disabilities and their vocational implications. The coefficient alpha computed for the total sample was .80, indicating relatively high internal consistency of the items constituting this factor. The mean perceived importance rating for this factor was 3.29 (*SD* = .55).

**Summary.** Our respondents rated all knowledge domains as important (a rating of 2 or above). In terms of relative importance, medical, functional, and environmental implications of disability was the most important knowledge domain (M = 3.30). Case and caseload management (M = 3.10) was the second most important knowledge domain. These two factors were considered very important knowledge for rehabilitation counseling practices. Rehabilitation services and resources (M = 2.70) and career counseling, assessment, and consultation services (M = 2.66) were rated as important to very important factors. Counseling theories, techniques, and applications (M = 2.40) and health care and disability systems (M = 2.22) were rated as important knowledge areas.

**TABLE 2. Mean Importance of Knowledge Domains Related to Rehabilitation Counseling Practice**

| Knowledge domain | *M* | *SD* |
|---|---|---|
| **Factor 1: Career Counseling, Assessment, and Consultation Services** | **2.67** | **.79** |
| ***Subfactor A–Vocational Consultation and Employer Services*** | ***2.53*** | ***.87*** |
| Employer practices that affect the employment or return to work of individuals with disabilities (47) | 2.87 | 1.15 |
| Ergonomics (82) | 2.44 | 1.20 |
| Job modification and restructuring techniques (43) | 2.85 | 1.16 |
| Job analysis (42) | 2.80 | 1.15 |
| Consultation services available from rehabilitation counselors for employers (48) | 2.49 | 1.12 |
| Methods and techniques used to conduct labor market surveys (84) | 2.20 | 1.34 |
| "Work conditioning," or work hardening, resources and strategies (81) | 2.39 | 1.18 |
| Business/corporate terminology (85) | 2.02 | 1.20 |
| Accommodation and rehabilitation engineering services (44) | 2.71 | 1.14 |
| Transferable skills analysis (65) | 2.97 | 1.14 |
| Marketing strategies and techniques for rehabilitation services (66) | 2.16 | 1.27 |
| Workplace culture and environment (67) | 2.45 | 1.09 |
| ***Subfactor B–Job Development and Placement Services*** | ***3.00*** | ***.90*** |
| Employer development and job placement (49) | 2.76 | 1.25 |
| Client job-seeking skills development (50) | 3.02 | 1.09 |
| Client job retention skills (51) | 2.88 | 1.17 |
| Job placement strategies (45) | 3.04 | 1.18 |
| Job and employer development (26) | 3.29 | 1.00 |
| Follow-up/postemployment services (52) | 2.57 | 1.25 |
| Occupational and labor market information (31) | 3.09 | 1.07 |
| Vocational implications of functional limitations associated with disabilities (30) | 3.37 | .92 |
| ***Subfactor C–Career Counseling and Assessment Techniques*** | ***2.55*** | ***.83*** |
| Computer-based assessment tools (95) | 2.28 | 1.21 |
| Tests and evaluation techniques available for assessing clients' needs (36) | 2.88 | 1.05 |
| Computer-based counseling tools in rehabilitation counseling (28) | 2.33 | 1.21 |
| Computer-based job-matching systems (96) | 2.21 | 1.28 |
| Interpretation of assessment results for rehabilitation planning purposes (37) | 3.05 | 1.03 |
| Internet resources for rehabilitation counseling (92) | 2.44 | 1.22 |
| Assistive technology (76) | 2.70 | 1.14 |
| Theories of career development and work adjustment (29) | 2.62 | 1.11 |
| The evaluation procedures for assessing the effectiveness of rehabilitation services and outcomes (39) | 2.46 | 1.17 |
| **Factor 2: Counseling Theories, Techniques, and Applications** | **2.40** | **.68** |
| ***Subfactor A–Mental Health Counseling*** | ***2.47*** | ***.85*** |
| Mental health and psychiatric disability concepts (80) | 3.01 | 1.02 |
| Rehabilitation techniques for individuals with psychological disabilities (62) | 2.98 | 1.05 |
| Treatment planning for clinical problems (e.g., depression and anxiety) (93) | 2.58 | 1.19 |
| Substance abuse and treatment (59) | 2.57 | 1.13 |
| Human sexuality and disability issues (88) | 2.05 | 1.14 |
| Theories and techniques of clinical supervision (90) | 1.97 | 1.32 |
| Wellness and illness prevention concepts and strategies (79) | 2.13 | 1.18 |
| ***Subfactor B–Group and Family Counseling*** | ***2.00*** | ***1.07*** |
| Family counseling theories (12) | 2.00 | 1.14 |
| Family counseling practices and interventions (13) | 2.04 | 1.19 |
| Group counseling practices and interventions (11) | 1.99 | 1.25 |
| Group counseling theories (10) | 1.97 | 1.24 |
| ***Subfactor C–Individual Counseling*** | ***2.91*** | ***.81*** |
| Individual counseling theories (14) | 3.04 | .99 |
| Individual counseling practices and interventions (15) | 3.22 | .89 |
| Behavior and personality theory (16) | 2.93 | .94 |
| Human growth and development (17) | 2.47 | 1.06 |
| ***Subfactor D–Psychosocial and Cultural Issues in Counseling*** | ***2.72*** | ***.72*** |
| Psychosocial and cultural affect of disability on families (35) | 2.74 | 1.00 |
| Psychosocial and cultural affect of disability on individuals (34) | 3.07 | .90 |

*(table continues)*

*(Table 2 continued)*

| Knowledge domain | *M* | *SD* |
|---|---|---|
| Multicultural counseling issues (18) | 2.80 | 1.03 |
| Gender issues (19) | 2.51 | 1.05 |
| Ethical decision-making models and processes (68) | 2.95 | 1.03 |
| Societal issues, trends, and developments as they relate to rehabilitation (9) | 2.85 | .94 |
| Techniques for working with individuals with limited English proficiency (70) | 2.15 | 1.18 |
| ***Subfactor E–Foundations, Ethics, and Professional Issues*** | **1.75** | **.85** |
| The design of research projects, program evaluation, and needs assessment approaches (55) | 1.59 | 1.22 |
| Basic research methods (54) | 1.73 | 1.21 |
| The history of rehabilitation (1) | 1.57 | 1.06 |
| The philosophical foundations of rehabilitation (2) | 2.18 | 1.07 |
| Ethical issues related to online counseling (91) | 1.66 | 1.48 |
| **Factor 3: Rehabilitation Services and Resources** | **2.60** | **.73** |
| Supported employment strategies and services (46) | 2.45 | 1.29 |
| School-to-work transitions for students with disabilities (64) | 2.29 | 1.38 |
| Services available for a variety of rehabilitation populations, including persons with multiple disabilities (22) | 3.27 | .91 |
| Planning the provision of independent living services with clients (25) | 2.29 | 1.23 |
| Financial resources for rehabilitation services (38) | 2.75 | 1.10 |
| Community resources and services for rehabilitation planning (27) | 3.18 | .95 |
| Social Security programs, benefits, and disincentives (60) | 2.80 | 1.12 |
| Organizational structure of the public vocational rehabilitation service delivery system (5) | 2.22 | 1.16 |
| Rehabilitation services in diverse settings (23) | 2.67 | 1.07 |
| Organizational structure of nonprofit service delivery systems (7) | 2.14 | 1.12 |
| Dual diagnosis and the workplace (89) | 2.49 | 1.14 |
| Advocacy processes needed to address institutional and social barriers that impede access, equity, and success for clients (87) | 2.62 | 1.10 |
| **Factor 4: Case and Caseload Management** | **3.10** | **.66** |
| Case management process and tools (73) | 3.16 | .94 |
| Case recording and documentation (71) | 3.29 | .90 |
| Principles of caseload management (83) | 2.92 | 1.06 |
| Professional roles, functions, and relationships with other human service providers (86) | 2.88 | 1.00 |
| Clinical problem-solving and critical-thinking skills (72) | 3.29 | .92 |
| Negotiation and conflict resolution strategies (74) | 2.96 | 1.03 |
| Case management process, including case finding, service coordination, referral to and use of other disciplines, and client advocacy (24) | 3.37 | .89 |
| Techniques for working effectively in teams and across disciplines (69) | 2.93 | 1.05 |
| **Factor 5: Health Care and Disability Systems** | **2.24** | **.85** |
| Managed care concepts (77) | 2.19 | 1.28 |
| Health care delivery systems (78) | 2.23 | 1.19 |
| Employer-based disability prevention and management strategies (58) | 2.11 | 1.24 |
| Workers' compensation laws and practices (57) | 2.40 | 1.32 |
| Techniques for evaluating earnings capacity and loss (61) | 2.03 | 1.36 |
| Expert testimony (56) | 2.07 | 1.36 |
| Life care planning (63) | 1.89 | 1.32 |
| Organizational structure of private, for-profit vocational rehabilitation systems (6) | 2.10 | 1.19 |
| Health care benefits (75) | 2.47 | 1.19 |
| Appropriate medical intervention resources (41) | 2.86 | .99 |
| **Factor 6: Medical, Functional, and Environmental Implications of Disability** | **3.29** | **.55** |
| Environmental barriers for individuals with disabilities (20) | 3.17 | .91 |
| Legislation or laws affecting individuals with disabilities (3) | 3.16 | .90 |
| Physical/functional capacities of individuals with disabilities (40) | 3.40 | .86 |
| Medical aspects and implications of various disabilities (33) | 3.41 | .79 |
| Rehabilitation terminology and concepts (4) | 3.10 | .88 |
| Medical terminology (32) | 3.21 | .87 |
| Attitudinal barriers for individuals with disabilities (21) | 3.31 | .83 |
| Ethical standards for rehabilitation counselors (8) | 3.58 | .70 |

*Note*. The numbers in parentheses following each statement are the item numbers from the original instrument.

### *Function and Knowledge Importance Across Settings*

As mentioned previously, rehabilitation counselors are employed in multiple job settings (e.g., state vocational rehabilitation, private not-for-profit rehabilitation, proprietary rehabilitation, insurance rehabilitation, rehabilitation hospitals, mental health centers). A multivariate analysis of variance (MANOVA) was employed to explore the relationship between employment settings and the perceived importance of job functions and knowledge. For this analysis, we grouped work settings into the following seven categories: public rehabilitation programs, nonprofit rehabilitation centers and CBOs, proprietary rehabilitation programs, colleges/universities, mental health centers, public schools, and others.

**Knowledge Domains.** A MANOVA was computed to test the differences among rehabilitation counselors who worked in these seven employment settings on the linear combination of the six knowledge domains. Upon finding a significant multivariate *F* (Wilks lambda = .65, $F(36, 3744) = 12.37$, $p < .001$), a univariate ANOVA was computed for each dependent variable. The alpha level was divided by six for each pair comparison to control for Type I error (alpha = .01/6 = .0017). The results indicated significant differences on five of the six knowledge domains. Rehabilitation counselors across employment settings rated case and caseload management as similarly important.

Posthoc comparisons indicated that counselors who worked in public rehabilitation programs (M = 3.37) rated the medical, functional, and environmental implications of disability factor as more important than practitioners who worked for nonprofit rehabilitation (M = 3.06) and mental health programs (M = 3.03). Practitioners who worked in proprietary rehabilitation settings (M = 2.35) consistently rated rehabilitation resources and services (for people with severe disabilities) as less important than did practitioners who worked in public rehabilitation programs (M = 2.88), nonprofit rehabilitation programs (M = 2.96), and college/university settings (M = 2.73). Similarly, practitioners in proprietary rehabilitation programs (M = 2.14) rated counseling theories, techniques, and applications as less important than did practitioners in public rehabilitation programs (M = 2.37), nonprofit rehabilitation facilities (M = 2.55), colleges/universities (M = 2.74), mental health centers (M = 2.67), public schools (M = 2.81), and other settings (M = 2.60). Conversely, proprietary rehabilitation practitioners (M = 2.55) rated health care and disability systems as more important than practitioners in public rehabilitation programs (M = 1.95), nonprofit rehabilitation programs (M = 2.10), colleges/universities (M = 1.94), and other settings (M = 2.23). Practitioners in both public programs (M = 2.79) and proprietary rehabilitation programs (M = 2.81) rated career counseling, assessment, and consultation services as more important than practitioners in nonprofit rehabilitation programs (M = 2.48), mental health centers (M = 2.15), and other settings (M = 2.45).

**Job Functions.** A MANOVA was computed to test the differences among rehabilitation counselors who worked in these seven employment settings on the linear combination of the seven major rehabilitation counselor job functions. Upon finding a significant multivariate *F* (Wilke's lambda = .41, $F(42, 2518) = 12.66$, $p < .0001$), a univariate ANOVA was computed for each dependent variable. The alpha level was divided by seven for each pair comparison to control for Type I error ($\alpha = .01/7 = .0014$). The results indicated significant differences on five of the seven rehabilitation counselor functions. Rehabilitation counselors across employment settings rated counseling interventions and professional advocacy as having similar importance.

Post hoc comparisons using the Bonferroni procedure indicated that practitioners in both public programs (M = 2.89) and proprietary rehabilitation programs (M = 2.77) rated vocational counseling and consultation as more important than did practitioners in nonprofit rehabilitation settings (M = 2.30), colleges/universities (M = 2.07), mental health centers (M = 1.68), public schools (M = 1.67), and other settings (M = 1.97). Similarly, they also rated case management (M = 3.27 and M = 3.27 for practitioners in public programs and proprietary rehabilitation programs, respectively) as more important than practitioners in nonprofit rehabilitation settings (M = 2.92), colleges/universities (M = 2.52), mental health centers (M = 2.84), public schools (M = 2.40), and other settings (M = 2.85). Rehabilitation counselors in public rehabilitation programs rated the use and provision of community-based rehabilitation services as more important (M = 2.64) than did practitioners in nonprofit rehabilitation settings (M = 2.20), proprietary rehabilitation settings (M = 2.00), colleges/universities (M = 2.00), mental health centers (M = 1.80), public schools (M = 1.10), and other settings (M = 2.06). Rehabilitation counselors in proprietary rehabilitation settings rated researching medical and labor market information for professional practice as more important (M = 2.47) than did practitioners in public rehabilitation programs (M = 1.83), nonprofit rehabilitation programs (M = 1.56), colleges/universities (M = 1.96), mental health centers (M = 1.19), public schools (M = 0.85), and other settings (M = 2.00).

## Discussion

The results of this study provide a new empirically based description of the knowledge base underlying the practice

of rehabilitation counseling, as well as an updated description of the functions associated with contemporary practice. In the process of conducting this study, two survey instruments (KVI-R and RSI-R) were significantly revised to include content that reflects new practices (tasks and functions) and knowledge requirements for rehabilitation counselors in today's complex human service delivery environments. These revised areas were developed based on the expert opinion of Delphi panelists and our review of contemporary literature in these areas. The results also provide further evidence of the construct validity of the more traditional knowledge areas and professional functions associated with the role of the rehabilitation counselor that have been empirically described in previous studies (e.g., Harrison & Lee, 1979; Leahy et al., 1987; Leahy et al., 1993; Muthard & Salamone, 1969; Rubin et al., 1984; Wright & Fraser, 1975). Taken as a whole, these various research efforts have provided consistent evidence of an established and mature discipline (Friedson, 1994) in relation to the knowledge base of the profession and the subsequent competency requirements of practitioners.

## *Relationship with Previous Research*

The results of this study differ somewhat from the 10 knowledge domains described in the last major national study in this area (Leahy et al., 1993), which CRCC currently uses to guide the test specifications for the certification examination. Some of these differences are related to the methods employed in each of these studies. In this study, additional knowledge areas were added ($n$ = 38) based on the researchers' assumption, which was subsequently confirmed by the sample, that they represented new emerging knowledge requirements related to rehabilitation counseling practice. In addition, a different factor analytic approach was used in the current study in which principal axis factor analysis rather than principal components analysis was employed (see Method section). Finally, this study's respondents were randomly selected from the entire CRC database, as opposed to the 1993 study, in which only those CRCs who were in the process of certification renewal (every 5 years) were included.

The primary structural differences between this study and the 1993 study are due to this study's greater degree of parsimony in the overall description (6 knowledge domains instead of 10) and additional depth and range for each of the knowledge domains that were identified. A review of the means of individual items (for those items appearing on both versions of the KVI) reveals a similar pattern of response in terms of importance between the two research efforts, although slightly lower means (as a general pattern) are noted for most items in the present effort.

## *Emerging Knowledge Domains and Job Functions*

In this study, we have included all of the knowledge items and professional tasks that were represented on the two revised instruments. This has resulted in a more detailed description of the functions and knowledge areas associated with the rehabilitation counselor's role. For example, the KVI, which was developed and used in the last formal study of CRCs (Leahy et al., 1993), consisted of 58 items (knowledge areas), compared to the 96 items on the KVI-R, which was used in the present study. Although the majority of the new knowledge items performed well and were rated by CRCs as clearly important to effective practice (e.g., substance abuse and treatment, social security programs, benefits and disincentives, techniques for individuals with psychological disabilities, transferable skills analysis, ethical decision making models and processes, clinical problem solving and critical thinking skills, negotiation and conflict resolution strategies, mental heath and psychiatric disability concepts), other knowledge areas were perceived by the respondents as only marginally important to practice (e.g., life care planning, techniques for evaluating earnings capacity and loss, business/corporate terminology, human sexuality and disability issues, theories and techniques of clinical supervision). This same observation relates to the new tasks introduced in the RSI-R. Some of the areas rated as marginally important appear to be setting-specific domains and therefore caution should be exercised when generalizing these results to all practitioners across settings.

## *Setting-Related Differences*

Setting-specific variables also appeared to affect the overall rating of the knowledge domains and functions by participants. Although each of the knowledge domains and functions were rated by participants as important to effective service delivery, some differences in the relative importance were noted between settings, a finding that has been previously reported in the literature (Leahy et al., 1987; Leahy et al., 1993; Rubin et al., 1984). These differences appear logical and directly related to the distinctions between practice settings in relation to overall missions and objectives, anticipated outcomes, and characteristics of the population served.

## *Frequency of Functions and Tasks*

In addition to assessing the importance of various knowledge domains and functions in this study, we also looked at the frequency with which CRCs performed each task. These data indicate that the most frequently performed tasks fall under the functional domains of case manage-

ment, professional advocacy, and provision of counseling, followed by vocational consultation, assessment, use of community-based services, and application of research. These data provide us with a description of how rehabilitation counselors, on average and across settings, proportionally divide their time across functions on a daily basis in practice.

### *Limitations*

The findings from this study should be viewed and applied within the context of certain important limitations. Although random selection of participants strengthened the generalizability of these findings, only individuals who were currently credentialed by CRCC were selected for the sample. In addition, although the response rates for both efforts (45% for the KVI-R and 39% for the RSI-R) are generally acceptable for these types of survey research applications, a limitation is nevertheless noted. Thus, we urge the reader to consider the implications of nonresponse bias when interpreting the results and when applying these findings to practicing rehabilitation counselors who are not certified and were therefore not included in this study. The content sampling of the knowledge and functional items that were selected by the researchers in revising the instruments employed in this study provides another potential limitation. To protect against this limitation, a Delphi process was used to develop items, and the Examination and Research Committee of the CRCC reviewed the items and findings for the omission of important content. Finally, another classic limitation imposed by the research methods employed in this study relates to the questionable reliance on self-report for assessing the importance of various knowledge domains and functions associated with effective practice.

## CONCLUSIONS

The primary purpose of this investigation was to conduct a work behavior analysis of CRCs in today's diverse practice environments to identify the factor structure underlying major knowledge domains and job functions essential to the practice of rehabilitation counseling. In other words, this study examined what the rehabilitation counselor needs to know to provide effective services to individuals with disabilities and to identify and describe what they actually do in practice to effect positive outcomes with the clients they serve. The findings and specific data from this study will be applied by the CRCC to examine and set test specifications for future versions of the CRC examination. These findings may also be used by the profession to update the official scope-of-practice statement and by educators who are refining preservice curriculums and CORE to validate and revise the educational standards applied in accreditation decisions.

For CRCC, the primary application of the knowledge gained through this study is to use the data described (knowledge domains and major functions) to examine their current test specifications for potential modification in light of these new findings. In examining the results of this study for test specification purposes, we recommend using the data from the KVI-R, which identifies the knowledge domains important to rehabilitation counseling practice as the primary guide in setting test specifications. Data from the RSI-R, which identifies the importance and frequency of functions and tasks employed in practice, should be used as supplemental information to assist CRCC in making decisions, particularly those that involve the proportion of items that should be drawn from any knowledge domain in the test construction process.

In addition, these data can also be used by educators in preservice rehabilitation counseling programs to evaluate, update, and revise their curriculum to assure they are covering the knowledge domains that practitioners on a national basis, across practice settings, indicate are important to the effective delivery of services. Because the results include knowledge domains and professional functions not described in previous research, educators will need to evaluate these new emerging knowledge domains to make critical decisions about which of the knowledge areas have reached the threshold necessary to be included in the curriculum of preservice educational programs (e.g., substance abuse and treatment, social security programs, benefits and disincentives, transferable skills analysis, ethical decision-making models and processes, clinical problem solving and critical thinking skills, negotiation and conflict resolution strategies, mental heath and psychiatric disability concepts). These issues have always been important when introducing new content to the curriculum. What makes this situation unique is the sheer number of new knowledge and task areas to consider. In addition, importance data can be used as an indicator of the amount of time and focus the specific knowledge domain should receive in formal courses that prepare students for graduate level careers as rehabilitation counselors. Similarly, CORE, as the national accrediting body of rehabilitation counseling graduate programs, can apply these findings and specific data to their ongoing review and refinement of educational content standards. These data, from a practitioner sample, represent a practice-based perspective in relation to the importance of these various knowledge areas that could prove valuable in the standards review process, in combination with input from the educational community.

The additional depth and breadth of the knowledge domains and professional functions identified in this study

presents some real challenges to preservice preparation programs and accreditation efforts of the discipline. Our history as a professional discipline has been to continually add new knowledge and skills to the overall competency requirements of the rehabilitation counselor. In recent years, we have witnessed significant changes in the delivery of rehabilitation counseling services in the United States in response to evolving federal legislative mandates (e.g., Rehabilitation Act Amendments of 1998), changes in state workers' compensation laws, the generation of new knowledge, and changes in the larger business and economic communities. As this study supports, nearly every practice setting in which rehabilitation counseling services are provided (e.g., public, private for profit, community-based rehabilitation organizations) has undergone change in the way that services are delivered and in the emergence of new knowledge and skill requirements for practitioners who deliver these services. Given these trends, at what point will these competency requirements be so extensive (e.g., broad and deep) that we can no longer expect the same level of skill development to be required for effective practice of the practitioners we train and certify as competent professionals? As these trends continue, the profession will need to revisit these issues and make further determinations of what constitutes the core knowledge requirements of the discipline and what content should be identified specifically for specialized practice in relation to setting and population.

Finally, the findings from this study can also be used by the profession to assess and potentially refine the discipline's scope-of-practice statement that serves to inform the public, consumers, legislators, policymakers, and other related service providers about rehabilitation counseling practice and the competency areas in which we have developed specific expertise in serving individuals with disabilities. This is a particularly important application of this research because it directly affects the profession's ability to include and represent rehabilitation counselors in state counselor licensure statutes as appropriately trained and qualified professionals.

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