

Guidelines for Competency Development and Measurement in Rehabilitation Psychology Postdoctoral Training

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Objective: This study describes the results of a multidisciplinary conference (the Baltimore Conference) that met to develop consensus guidelines for competency specification and measurement in postdoctoral training in rehabilitation psychology. **Methods:** Forty-six conference participants were chosen to include representatives of rehabilitation psychology training and practice communities, representatives of psychology accreditation and certification bodies, persons involved in medical education practice and research, and consumers of training programs (students). **Results:** Consensus education and training guidelines were developed that specify the key competencies in rehabilitation psychology postdoctoral training, and structured observation checklists were developed for their measurement. **Discussion:** This study continues the development of more than 50 years of thinking about education and training in rehabilitation psychology and builds on the existing work to further advance the development of guidelines in this area. The conference developed aspirational guidelines for competency specification and measurement in rehabilitation psychology postdoctoral training (i.e., for studying the outcomes of these training programs). Structured observation of trainee competencies allows examination of actual training outcomes in relation to intended outcomes and provides a methodology for studying how program outcomes are related to program structures and processes so that program improvement can occur. Best practices in applying program evaluation research methods to the study of professional training programs are discussed.

Keywords: rehabilitation psychology, psychology, training

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Impact and Implications

- The importance of assessing health-care professional competencies during training is well recognized. However, most assessment procedures in this area are either not directly related to performance competencies (oral and written examinations, self-ratings, and student portfolios) or are significantly complex and expensive (objective structured clinical examinations using standardized patients or computerized simulations). However, the use of structured observation checklists by supervisors during trainee/patient interactions has significant strengths in reliability, validity, and feasibility.
- This study describes the results of a multidisciplinary conference (the Baltimore Conference) that met to develop consensus guidelines for competency specification and measurement in postdoctoral training in rehabilitation psychology. This conference was innovative in specifying the key competencies and associated structured observations for the specialty.
- The specification of key competencies and associated structured observations can contribute to psychology workforce development in this important area of health care by providing a methodology for measuring training outcomes, studying how outcomes are related to structures and processes, and using these data for program improvement. Improvement in training practices can help increase the skills of rehabilitation service providers and enhance the health of the underserved population of persons with disability and chronic health conditions.

Introduction

In the education of health-care professionals, educators are responsible for developing specialists who can provide effective and efficient patient care and timely and productive consultation with other professionals to improve health care and health outcomes. Educators are responsible for producing these intended outcomes, not just to conduct teaching based on historical precedence and tradition. Therefore, a focus on competency outcomes in health-care professional education is essential.

Competency—the quality of being competent—is a key concept in professional education. Synonyms include “proficient,” “sufficient,” “adequate,” and “capable.” Competency is “having suitable or sufficient skill, knowledge, experience, and so forth, for some purpose” (Competent, n.d. a). The linguistic roots are from the French *compétence* or *competens*, meaning “sufficiency of means” or “sufficiency to deal with what is at hand” (Competence, n.d. a). The scientific definition also provides an interesting perspective, including having the capacity to function in a particular way, such as a “competent cell” being able to produce antibodies in response to an antigen (Competence, n.d. b) or a “competent valve” being able to close completely (Competence, n.d. c).

Although there were efforts to focus educational activities on the development of specific competencies in the 1920s, it was not until the 1960s that more systematic efforts took place to develop competency-based education (Tuxworth, 1989). This involved a shift from focusing on what was being taught to what was being learned (Harrison & Mitchell, 2006).

There have been significant efforts since the 1980s to develop competency-based training in psychology (Belar & Perry, 1992; Bourg et al., 1987; Bourg, Bent, McHolland, & Stricker, 1989; Callan, Peterson, & Stricker, 1986; Kaslow, 2004; Kaslow et al., 2004; Peterson et al., 1992; Peterson, Peterson, Abrams, & Stricker, 1997; Roberts, Borden, Christiansen, & Lopez, 2005), and the American Psychological Association (APA) has invested considerable resources into developing specific competency definitions and measurements during the 1990s and 2000s (the Joint Council on Professional

Education in Psychology, the Task Force on the Assessment of Competence in Professional Psychology, the Assessment of Competency Benchmarks Workgroup, the Competency Assessment Toolkit for Professional Psychology—see <http://www.apa.org/ed/resources/>).

Trainee competencies are the training program outcomes, and it is by comparing actual outcomes in relation to intended outcomes, in the context of training program structures and processes, that program improvement can occur. However, to develop and study trainee competency assessment methodologies, it is first necessary to specify the key competency domains and the key competency items within domains.

In regard to efforts to define psychological competency domains, an initial review of the existing literature has the potential to leave the reader adrift in a sea of seemingly incompatible conceptualizations. However, on more careful reading, the variously defined competency domains are, in fact, quite compatible. Rodolfa et al. (2005) proposed the “competency cube” as a model to conceptualize psychological competencies (see Figure 1).

This model differentiates foundational competency domains such as scientific knowledge and methods, relationship skills, and ethical and legal standards from functional competency domains such as assessment, intervention, and consultation. However, the differentiation between foundational and functional competency domains is not always carried through in the existing literature, thus potentially confusing the reader. The existing literature defines various numbers of psychological competency domains: 6 (Greenberg, Caro, & Smith, 2010), 7 (Fouad et al., 2009; APA, Commission for the Recognition of Specialties and Proficiencies in Professional Psychology [CRSPPP], n.d.¹; Cubic et al., 2012), 8 (Roberts, Borden, Christiansen, & Lopez, 2005; Kaslow et al., 2009), 9 (American Board of Professional Psychology/American Board of Rehabilitation Psychology [ABRP], 2012)², 11 (Hibbard & Cox, 2010), and 16 (Hatcher et al., 2013). In some of these conceptualizations, supervision and teaching are combined as a single domain, and in other conceptualizations supervision and teaching are separate domains. One conceptualization (Greenberg, Caro, & Smith, 2010) combines intervention, consultation, and supervision into a single domain.

Despite these apparent inconsistencies, once a distinction is made between foundational and functional competency domains, much of the remaining incompatibility in the existing literature is simply a matter of variance in terminology. Tables 1 and 2 show how the major conceptualizations of psychology competencies map onto the Rodolfa et al. (2005) functional (see Table 1) and foundational (see Table 2) competencies. Thus, it appears that the Rodolfa et al., 2005 conceptualization of competency domains is a useful taxonomy to clarify and unify the literature.

However, there are many methods of assessing competency domains in psychology. Kaslow et al. (2009) discussed 15 different competency assessment methods. As with the competency domains, Stiers et al. (2012) provide a structure for grouping these into six types of assessment methods (excluding written products, such as topic essays and literature reviews, which are rarely used in bedside and

¹ CRSPPP does not specify competencies per se, but it does specify seven “core professional practice domains.”

² Although ABRP lists “consumer protection” as a functional competency, the definition includes advocacy, legal standards, and diversity, which in all other conceptualizations are defined as foundational competencies rather than functional competencies.

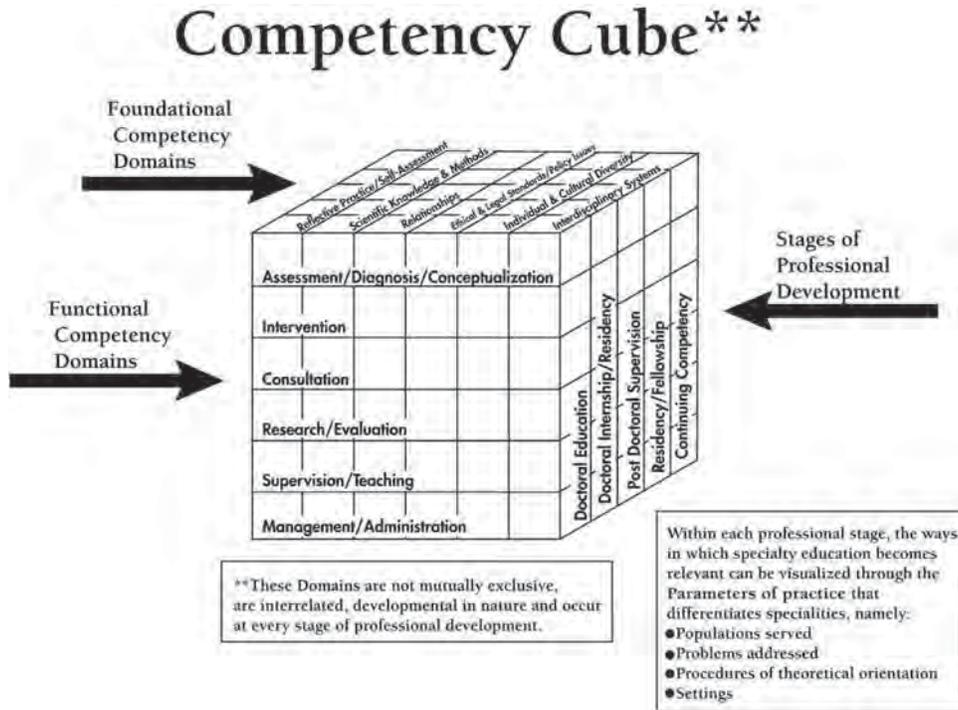


Figure 1. Competencies cube (Rodolfa et al., 2005).

clinic training) (see Table 3). Grouping these competency assessment methods into types allows for specification of a competency assessment cube as shown in Figure 2.

Structured observation has significant strengths in reliability, validity, and feasibility. However, psychology is still working

to develop such tools and study their performance as reliable and valid measures of trainee competencies. A survey of rehabilitation psychology training programs in the United States and Canada (Stiers & Stucky, 2008) found that almost all sites (98%) relied on written evaluations by supervisors to assess

Table 1
Functional Competency Domains

Author(s) [number of domains]	Functional competency domains						
Rodolfa et al., 2005 [6]	Assessment	Intervention	Consultation	Research and evaluation	Supervision and teaching	Management and administration	
Roberts et al., 2005 [5]	Assessment	Intervention	Consultation	Scientific foundations and research	Supervision		
Fouad et al., 2009 [6]	Assessment	Intervention	Consultation	Research and evaluation	Supervision and teaching	Administration	
Kaslow et al., 2009 [7]	Assessment	Intervention	Consultation	Research and evaluation	Supervision; teaching	Administration	
Hibbard and Cox, 2010 [6]	Assessment	Intervention	Consultation		Supervision; teaching	Management	
Greenberg, Caro, and Smith, 2010 [2]	Assessment	Intervention (combined)	Consultation (combined)		Supervision (combined)		
APA, CRSPPP, n.d. [5]	Assessment	Intervention	Consultation	Research and inquiry	Supervision		
Cubic et al., 2012 [7]	Assessment	Intervention	Consultation	Research	Supervision; teaching	Program development	
ABPP/ABRP, 2012 [4]	Assessment	Intervention	Consultation	Scientific base and application			
HSPEC, 2013 [7]	Assessment	Intervention	Consultation	Science (scientific knowledge and methods; research/evaluation)	Supervision; teaching		
Hatcher et al., 2013 [8]	Assessment	Intervention	Consultation; interdisciplinary systems	Evidence-based practice	Supervision; teaching	Management-administration	

Note. HSPEC = Health Service Psychology Education Collaborative.

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Table 2
Foundational Competency Domains/Other

Author(s) [number of domains]	Foundational competency domains					Other
	Reflective practice/ self-assessment	Scientific knowledge and methods	Relationships	Ethical and legal standards/ policy issues	Individual and cultural diversity	Interdisciplinary systems
Rodolfa et al., 2005 [6] Roberts et al., 2005 [3]		Ethical, legal, public policy issues (combined)	Individual and cultural diversity			Advocacy (combined); Professional development
Fouad et al., 2009 [1] Kaslow et al., 2009 [8]	Reflective practice	Scientific knowledge and methods	Relationships	Ethical and legal standards and policy	Individual and cultural diversity	Advocacy Advocacy; professionalism
Hibbard and Cox, 2010 [5] Greenberg, Caro, and Smith, 2010 [4]		Science base and application Scientific knowledge	Interpersonal interactions	Ethics and legal foundations Professionalism/ethics	Individual and cultural diversity Interpersonal and multicultural competence	Professional identification Evidence-based decision making/critical reasoning Public interest; continuing professional development
APA, CRSPPP, n.d. [2]			Interpersonal interactions	Ethical and legal foundations	Individual and cultural diversity	Professional identification; consumer protection ²
ABPP/ABRP, 2012 [5]			Relational (interpersonal skills and communication)	Ethical and legal standards and policy	Individual and cultural diversity	Professional values and attitudes; professional leadership development; advocacy
HSPEC, 2013 [9]	Reflective practice/ self-assessment/ self-care	Evidence-based practice	Relationships	Ethical and legal standards and policy	Individual and cultural diversity	Professional values and attitudes; advocacy
Hatcher, 2013 [8]	Reflective practice/ self-assessment/ self-care	Scientific knowledge and methods; research/evaluation	Relationships	Ethical and legal standards and policy	Individual and cultural diversity	Professional values and attitudes; advocacy

Note. HSPEC = Health Service Psychology Education Collaborative.

Table 3
Assessment Methods for Functional Competencies

Author(s) [number of domains]	Assessment methods for functional competencies					
Stiers et al., 2012 [6]	Performance appraisal ratings by supervisors, peers, and colleagues	Examinations— oral and written examinations and clinical vignettes	Structured observations, structured item checklist ratings	Record review ratings	Self-assessment, self-ratings, and student portfolios	Patient outcomes, patient clinical outcomes, and satisfaction
Kaslow et al., 2009 [15]	<ul style="list-style-type: none"> • 360° evaluation • Annual/rotation performance review 	<ul style="list-style-type: none"> • Case presentation review • Structured oral examinations • Written examinations 	<ul style="list-style-type: none"> • Competency evaluation rating form • Live or recorded performance rating • Objective structured clinical examination • Simulation/role play^a • Standardized patient interviews^a 	<ul style="list-style-type: none"> • Record review 	<ul style="list-style-type: none"> • Portfolios • self-assessment 	<ul style="list-style-type: none"> • Client/patient process and outcome data • Consumer survey

^a Depending upon the level of structure of the rating scales and the specificity of the items used by the observers, simulation/role playing and standardized patient interviews could be listed under performance appraisal ratings (low structure and low specificity) or structured observations (high structure and high specificity).

trainee competencies, but only a minority of sites based these evaluation on structured knowledge/skill/behavior checklists (27%) or observer ratings of patient-trainee interactions (25%).

This article describes the results of a multidisciplinary conference that met to develop consensus guidelines for competency specification and measurement in postdoctoral training in rehabilitation psychology. The focus was on postdoctoral training because this is where specialization in rehabilitation psychology occurs (cf., Cox, Cox & Caplan, 2013, pp. 5, 7). The competency domains

were organized according to the Rodolfa, et al. (2005) six functional competencies, and the competency items were organized according to whether they have to do with knowledge, skills and abilities, or attitudes and values (the common model used in education and professional development, based on the work of Bloom, 1956; e.g., APA, 2006). The focus was on developing structured observations for assessment of functional competencies in this specialty; the foundational competencies of general psychologists were not addressed.

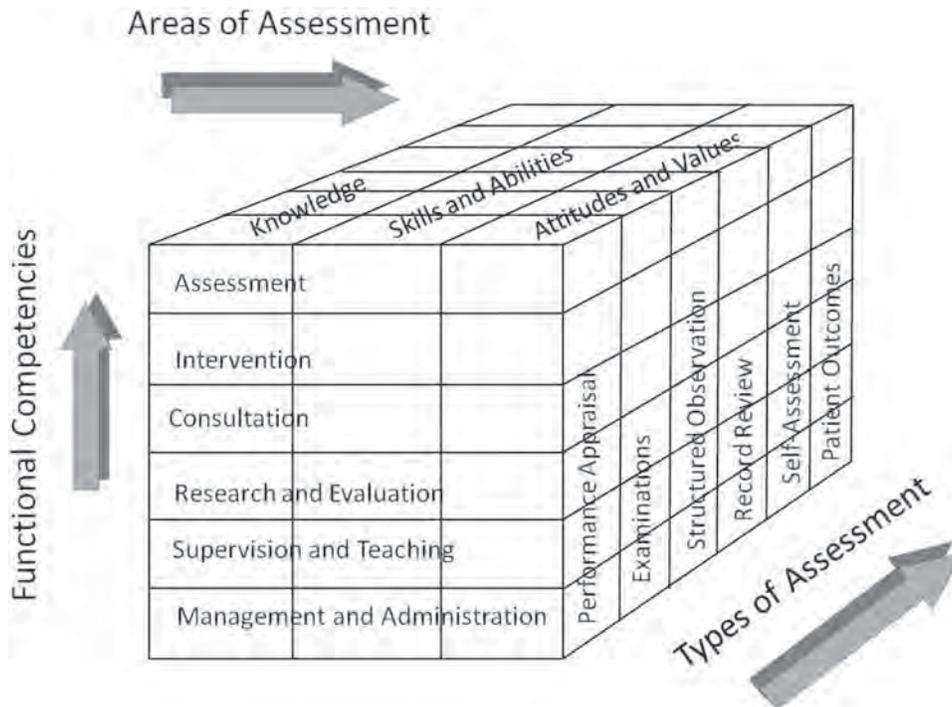


Figure 2. Assessment cube for functional competencies in psychology.

Development of the Consensus Conference

Full details of the conference methods and participants are described in [Stiers et al. \(2012\)](#). In brief, 46 conference participants were chosen to include representatives of rehabilitation psychology training and practice communities, psychology accreditation and certification bodies, and persons involved in medical education practice and research.

The conference had two goals. The first goal was to define the structures, processes, and outcomes of rehabilitation psychology postdoctoral training programs. That work is reported in [Stiers et al. \(2012\)](#). The second goal was to define the competencies to be developed and assessed in rehabilitation psychology postdoctoral training programs, and that work is reported here.

Workgroups were assigned to consider the six core competencies in psychology as defined by [Rodolfa, et al. \(2005\)](#): (a) assessment, (b) intervention, (c) consultation, (d) research and evaluation, (e) supervision and teaching, and (f) management and administration. Each competency area was divided into knowledge, skills/abilities, and attitudes/values.

Two workgroups were assigned to consider the first three competencies, and two workgroups were assigned to consider the second three competencies. Each group considered the definitions of the competencies as well as their structured observation items. After the conference, the workgroup products were combined and reconciled into a final set of competencies by area, and the recommended structured observations were combined and reconciled into a final set of structured observations for evaluation of these competencies.

Products of the Consensus Conference

The sections that follow describe the competencies and their structured observations. In all areas, competencies are developed through trainees first observing training faculty conduct the activities and demonstrate the competencies and then trainees conducting the activities and demonstrating the competencies in a logical sequence, which is graduated in complexity, with associated supervision, mentoring, and didactic teaching. There are no assumptions made about the level of competencies at admission to postdoctoral training (although see [Stiers et al., 2012](#) for discussion of postdoctoral admission guidelines); rather, this study focuses on the exit competencies for postdoctoral training in this specialty.

Guidelines for Competencies and Structured Observation in Assessment and Intervention

In regard to assessment and intervention, rehabilitation psychologist health practitioners are expected to be able to

- Provide evidence-based assessments and interventions with individuals and families experiencing problems related to physical and cognitive impairment, ability limitation, and participation restriction that focus on individual and family functioning, including affective, cognitive, personality, and behavioral functioning as well as social, educational, vocational, and recreational participation. This is done in collaboration with the person served to maximize psychological welfare, independence and choice, functional abilities, and social integration as well as to reduce secondary health complications.

- Focus on the person-task-environment interaction and the network of biological, psychological, social, cultural, physical, and political environments that comprise the situation at hand to identify the most appropriate level of analysis.
- Organize and deliver concise and accurate oral/written reports of assessment findings and treatment activities to patients and families.

[Table 4](#) provides the structured observations for evaluating competencies that trainees are expected to develop in the area of assessment and intervention.

Guidelines for Competencies and Structured Observation in Consultation

In regard to consultation, rehabilitation psychologist health practitioners are expected to be able to

- Participate in interprofessional collaboration and consultation at the clinical team level, the program level, and the community level (including educational, vocational, recreational, adaptive/assistive technology, disability peer and advocacy, legal, insurance, and governmental organizations) to provide comprehensive and effective care for persons with disability and to maximize rehabilitation team and program functioning.
- Consult and collaborate on issues involving team interactions, systems dynamics, program quality improvement activities, disability and health issues, and advocacy and rights issues.

[Table 5](#) provides the structured observations for evaluating competencies that trainees are expected to develop in the area of consultation.

Guidelines for Competencies and Structured Observation in Research and Evaluation

In regard to research and evaluation, rehabilitation psychologist health practitioners are expected to be able to

- Locate evidence from scientific studies relevant to specific health problems, apply knowledge of research design and statistical methods to the appraisal of study findings, and select appropriate evidence on diagnostic and therapeutic effectiveness to improve patient care.
- Develop and implement research questions in clinical rehabilitation activities and in health-care systems to improve the organization, delivery, and effectiveness of care.

[Table 6](#) provides the structured observations for evaluating competencies that trainees are expected to develop in the area of research and evaluation.

Guidelines for Competencies and Structured Observation in Teaching and Supervision

In regard to teaching and supervision, rehabilitation psychologist health practitioners are expected to be able to

- Participate in formal learning activities related to specialized rehabilitation psychology populations, problems, and techniques and participate in interdisciplinary educational activities such as supervised interdisciplinary team

Table 4
Structured Observations of Competencies in Assessment and Intervention

Knowledge

1. Demonstrate knowledge of common rehabilitation populations and medical conditions as well as relevant anatomy, physiology, and pharmacology.
2. Demonstrate knowledge of the physical, affective, cognitive, and behavioral components of health, illness, disability, and functioning across the life span.
3. Demonstrate knowledge of the diversity components of health, illness, disability, and functioning (e.g., family, social, cultural, and environmental).
4. Demonstrate knowledge of risk factors for disability and adverse health outcomes.
5. Demonstrate knowledge of the common affective, cognitive, personality, and behavioral problems in rehabilitation, including sexual adjustment and substance abuse issues as well as including issues related to abuse and exploitation of vulnerable persons.
6. Demonstrate knowledge of the common family and social problems in rehabilitation, including issues related to caregiver health and functioning and social and vocational integration.
7. Demonstrate knowledge of empirically supported theories and effective methods of assessment, diagnosis, and treatment of individual problems in rehabilitation, including affective, cognitive, personality, behavioral, sexual functioning, pain, substance abuse, and health behavior issues.
8. Demonstrate knowledge of empirically supported theories and effective methods of assessment, diagnosis, and treatment of family and social problems in rehabilitation, including educational, vocational, and recreational issues.
9. Demonstrate knowledge of the social psychology of disability, including disability as diversity and minority group membership, social contributions to activity limitations and participation restrictions, and cultural beliefs and attitudes toward persons with disability.
10. Demonstrate knowledge of policy, legal, resource, and environmental issues related to health and disability.

Skills/abilities

1. Create and maintain therapeutic working alliances with all stakeholders.
2. Effectively and efficiently gather history and interview data relevant to the referral question.
3. Proficiently administer and score psychological testing relevant to the referral question.
4. Accurately assess, using a strength-based approach, issues related to
 - a. Adaptation to disability by patient and family
 - b. Extent and nature of disability and preserved abilities, including cognitive functioning and decision-making capacities, and educational and vocational capacities
 - c. Personality/emotional functioning
 - d. Sexual functioning
 - e. Pain
 - f. Substance use/abuse
 - g. Social and behavioral functioning, including health behaviors and treatment participation
5. Evaluate family, social, cultural, diversity, and environmental issues related to disability.
6. Perform case conceptualization in rehabilitation, including individual, family, environmental, and social contexts, with the ability to identify the most appropriate level of analysis in conjunction with the person served and their preferences.
7. Develop and implement comprehensive psychological treatment strategies and techniques in rehabilitation, including individual and family/couples therapeutic interventions related to:
 - a. Adaptation to disability
 - b. Behavioral management
 - c. Sexual counseling
 - d. Pain management
 - e. Cognitive rehabilitation
 - f. Community integration
 - g. Health behavior change
8. Write a well-organized, concise psychological report with relevant and detailed recommendations.
9. Discuss assessment results and treatment plans with patients and families in a concise manner and effectively inform them for decision-making.
10. Evaluate patient safety and welfare concerns and seek appropriate consultation and referral when necessary.

Attitudes/values

1. Is aware of one's own attitudes and values that could affect assessment and treatment.
2. Provide appropriate care for patients and offer management options without imposing own biases.
3. Encourage persons served to participate in decision-making to the extent they are able to and desire.
4. Take into account the persons' served preferences and values when assessing and treating.

patient-care rounds, case conferences/team meetings, and/or formal educational opportunities.

- Provide effective teaching within areas of expertise in case conferences, seminars, didactics, and journal clubs.
- Participate in one-to-one (and perhaps group) supervision in an appropriate and effective manner.
- Provide supervision to psychology practicum and internship trainees (if applicable) that emphasizes skill building in providing patient care, consulting with other professionals, identifying relevant scientific data and conducting research, and practice management.

Table 7 provides the structured observations for evaluating competencies that trainees are expected to develop in the area of teaching and supervision.

Guidelines for Competencies and Structured Observation in Administration and Management

In regard to administration and management, rehabilitation psychologist health practitioners are expected to be able to

- Prioritize and manage unit/clinic resources and patient needs.

Table 5
Structured Observations of Competencies in Consultation

Knowledge

1. Demonstrate knowledge of issues related to working in health-care settings (e.g., infection control, advanced directives, decision-making capacity, restraints, etc.).
2. Demonstrate knowledge of professional roles and responsibilities of other health-care disciplines and of effective forms of interprofessional collaboration and consultation with rehabilitation team members.
3. Demonstrate knowledge of adaptive/assistive technology and psychological contributions to matching technology to consumer needs and preferences.
4. Demonstrate knowledge of ethical dilemmas and conflicts of interest in team functioning. Demonstrate understanding of how to facilitate ethical decision-making among team members.
5. Demonstrate knowledge of organizations relevant to persons with disability, including educational, vocational, recreational, adaptive/assistive technology, disability peer and advocacy, legal, insurance, and governmental organizations.

Skills/abilities

1. Provide concise, accurate verbal and written reports related to assessment and treatment activities that respond to the referral question and are tailored to the needs of the listener/reader (e.g., patient, family, health-care professionals, community representatives) and context (e.g., team meeting, family meeting, disability evaluation, vocational facilitation, etc.).
2. Demonstrate effective consultation with other professionals appropriate to the needs of the patient in ways that promote useful outcomes for the patient in the following consultation competencies:
 - a. Behavioral functioning improvement
 - b. Cognitive functioning
 - c. Vocational and/or educational considerations
 - d. Personality/emotional factors
 - e. Substance abuse identification and management
 - f. Sexual functioning and disability
3. Make recommendations within an interdisciplinary team and to community organizations that are relevant, practical, and helpful.
4. Facilitate continuity of care.
5. Recognize and address ethical dilemmas and conflicts of interest in consultation activities and facilitate ethical decision-making.

Attitudes/values

1. Demonstrate awareness of own responsibilities and follow up on tasks:
 - a. Be prepared and arrive on time.
 - b. Respond promptly when paged or called.
2. Contribute to positive team functioning:
 - a. Offer support and advice to colleagues when appropriate.
 - b. Invite others to share their knowledge and opinions.
 - c. Facilitate resolution of conflict among colleagues.
3. Recognize strengths and limitations of own knowledge and abilities and refer patients when appropriate.
4. Seek and be thoughtful about feedback from colleagues.
5. Acknowledge errors and undertake efforts to correct.
6. Maintain composure during difficult interactions.
7. Demonstrate appropriate boundaries with other professionals.
8. Demonstrate a valuing of diversity and the importance of differing views.

- Understand and apply appropriate diagnostic and procedure codes.
- Practice cost-effective health-care and resource allocation.
- Reflect on critical incidents to identify strengths and weaknesses.
- Perform systematic practice evaluation and improvement activities.

Table 8 provides the structured observations for evaluating competencies that trainees are expected to develop in the area of administration and management.

Guidelines for Competencies and Structured Observation in Additional Areas

In addition to these core competencies, there are additional competencies that are important for rehabilitation psychologists to be able to do.

- Understand and demonstrate appropriate professional conduct.
- Understand and apply appropriate ethical, legal, and regulatory standards and guidelines to patient care decisions

- Understand and apply appropriate issues related to cultural and individual diversity, and appropriate APA guidelines for providers of psychological services.

Table 9 provides the structured observations for evaluating competencies that trainees are expected to develop in additional areas.

Discussion

This study continues the development of more than 50 years of thinking about education and training in rehabilitation psychology. Wright (1959) discussed that the preparation of psychologists for work in rehabilitation requires training at the doctoral level, including internship, but with the incorporation of rehabilitation-specific didactic and experiential training. Shontz and Wright (1980) stated that rehabilitation psychology is based upon a distinctive body of theory, research and activities that are not the same as traditional clinical, counseling, or school psychology. Spear and Schoepke (1981), and Gold, Meltzer, and Sherr (1982) noted that general clinical and counseling psychology doctoral and internship training does not

Table 6
Structured Observations of Competencies in Research and Evaluation

Knowledge

1. Demonstrate familiarity with the current scientific literature in rehabilitation psychology and disability and with disability policy and legal and legislative issues.
2. Demonstrate knowledge of resources available to locate information relevant to patient care and program development.
3. Demonstrate understanding of how to use knowledge of research design and statistical methods to identify the level of evidence in published information.
4. Demonstrate familiarity with methods of integrating scientific literature and clinical information in the service of patient care and program development.
5. Demonstrate knowledge of ethical, legal, and regulatory standards for conducting research with human subjects.

Skills/abilities

1. Ask focused and operationalizable questions at the individual, team, or systems level.
2. Use current technological tools and informatics to locate information relevant for patient care and program development related to specialized rehabilitation psychology populations, problems, and procedures.
3. Effectively select information that is accurate and applicable to current patients and programs.
 - a. Identify available resources for conducting scientific literature searches.
 - b. Use effective and efficient search strategies to locate scientific literature relevant to specific questions/patients.
4. Appraise the research design, statistical methods, and findings of published studies to select data with the highest level of evidence.
 - a. Evaluate the relevance of scientific literature to referral questions and patient population.
 - b. Evaluate the quality of scientific literature (e.g., study design, analyses, power).
5. Integrate selected scientific literature and clinical information to improve patient care and treatment programs.
6. Evaluate treatment interventions and clinical outcomes in rehabilitation and use this information for continuous quality improvement.
7. Present at professional and/or scientific organizations and conferences related to rehabilitation psychology or produce a work product for peer review.

Attitudes/values

1. Demonstrate the importance of keeping up-to-date in studying and using evidence-based practices.
 2. Demonstrate the importance of informed consent and ethical treatment of research subjects.
 3. Demonstrate the importance of honesty and integrity in presenting/publishing research findings.
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encompass many areas important to rehabilitation psychology, such as issues unique to persons with disability, and issues unique to psychologists working within rehabilitative teams. Elliott and Gramling (1990) emphasized the importance of developing guidelines for specialized training in the assessment

and treatment of persons with chronic injury- and illness-related disabilities and their families as well as specialized training in consulting with rehabilitation teams and other professionals (e.g., social service and educational agencies, insurance and legal agencies).

Table 7
Structured Observations of Competencies in Teaching and Supervision

Knowledge

1. Demonstrate knowledge of methods of teaching specific to rehabilitation psychology and the provision of formal teaching activities.
2. Demonstrate knowledge of methods of providing supervision and evaluating trainees relevant to rehabilitation psychology.
3. Demonstrate knowledge of ethics and laws pertaining to teaching and supervisory relationships.
4. Demonstrate knowledge of diversity issues and individual differences pertaining to teaching and supervisory relationships.

Skills/abilities

1. Provide effective teaching within areas of expertise in didactics, journal clubs, case conferences, and professional seminars/colloquia/symposia.
2. Effectively translate Rehabilitation Psychology knowledge for interdisciplinary teaching and education.
3. Use feedback from learners to improve teaching.
4. Provide appropriate assessment and feedback to practicum and internship students that emphasize skill building in a supportive relationship.
5. Solicit supervisory feedback and use this to modify behavior.
6. Identify issues related to individual and cultural diversity and discuss these in supervision.

Attitudes/values

1. Attend on time and actively participate in scheduled training activities (classes, didactics, journal clubs, case conferences, professional seminars/colloquia/symposia, supervision, mentoring, etc.).
 2. Proactively seek and schedule supervision and mentoring.
 3. Prepare for teaching and supervision:
 - a. In regard to supervision, has done background reading and thinking about patient care issues and personal learning needs and prioritizes these and brings them for presentation and discussion.
 - b. In regard to teaching, has done background reading and thinking about the scheduled topic and is prepared to participate in discussion.
 4. Take responsibility for learning and development:
 - a. Demonstrate and apply accurate self-reflection and self-appraisal of strengths and weaknesses.
 - b. Identify needed learning and skill development and generate suggestions on how these can be addressed.
 - c. Develop professional growth plan in conjunction with supervisor and mentor.
 5. Demonstrate a valuing of diversity and the importance of differing views.
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Table 8
Structured Observations of Competencies in Management and Administration

Knowledge

1. Demonstrate knowledge of state laws of practice, including those related to confidentiality and mandatory reporting.
2. Demonstrate knowledge of disability-related legislation.
3. Demonstrate knowledge of key concepts and methods in practice management, including assessing practice outcomes for quality improvement.
4. Demonstrate understanding of hospital, unit, and clinic administrative structures and their relevance to service delivery.
5. Demonstrate knowledge of ethical, legal, and regulatory issues in rehabilitation, including informed consent, and issues related to patient confidentiality and privacy.

Skills/abilities

1. Prioritize and manage unit/clinic resources and patient needs.
2. Refer to and consult with other providers when appropriate.
3. Use accurate and appropriate diagnostic and procedure codes.
4. Practice cost-effective health care and resource allocation by appropriately weighing the costs and benefits of tests and treatments.
5. Identify when treatment has succeeded or is not expected to succeed and terminate treatment appropriately.
6. Conduct practice evaluation and improvement activities. Review critical incidents to identify strengths and weaknesses.

Attitudes/values

1. Demonstrate an understanding of the importance of quality assurance and strive to monitor and improve performance and efficiency.
 2. Demonstrate an understanding of the importance of customer service and of formal mechanisms for receiving, evaluating, and responding to patient complaints.
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Patterson and Hanson (1995) published the first formal guidelines for postdoctoral training in rehabilitation psychology. These guidelines specified that training should involve persons with disability and chronic health conditions, but they primarily focused

on the structural and process elements of training programs, modeled after the APA requirements for accreditation of training programs, rather than on any specific competencies acquired by residents. Hibbard and Cox (2010) further emphasized that spe-

Table 9
Structured Observations of Additional Competencies Applicable to Rehabilitation Psychology

Knowledge

1. Demonstrate knowledge of APA ethical principles.
2. Demonstrate knowledge of key components of professionalism, including appropriate behavior, timely responsibility for tasks, and honesty and integrity.
3. Demonstrate knowledge of general and rehabilitation-specific legal and health policy issues, including injury and illness prevention, patient advocacy, disability advocacy, financial and administrative aspects of treatment, legislative processes, social and physical environmental accessibility, and disability rights law.

Skills/abilities

1. Maintain patient confidentiality.
2. Behave professionally:
 - a. Manage personal affairs in a way that does not interfere with professional activities.
 - b. Complete assignments and responsibilities carefully, thoroughly, and on time.
 - c. Prioritize tasks and display effective time management skills to be efficient and effective.
 - d. Work beyond usual duties when necessary to provide appropriate care for patients.
 - e. Seek assistance when work load is too heavy.
 - f. Communicate with supervisors about barriers to effective work.
3. Identify ethical, legal, regulatory, and conflict of interest issues that arise and seek appropriate consultation.
4. Advocate for persons with disability in health-care settings and for rehabilitation services in legal and health policy settings.
5. Is able to discuss and apply relevant APA guidelines for providers of psychological services:
 - a. Guidelines for Assessment of and Intervention With Persons With Disabilities
 - b. Guidelines on Multicultural Education, Training, Research, Practice, and Organizational Change for Psychologists
 - c. Guidelines for the Evaluation of Dementia and Age-Related Cognitive Decline.
 - d. Guidelines for Psychological Practice with Older Adults
 - e. Guidelines for Psychological Practice with Girls and Women.
 - f. Guidelines for Psychological Practice with Lesbian, Gay, and Bisexual Clients
6. Discuss and apply relevant Americans with Disabilities Act guidelines.
7. Actively educate self about local and state resources for individuals with disabilities.
8. Actively provide appropriate care for self.

Attitudes/values

1. Demonstrate a commitment to professionalism, including appropriate behavior, timely responsibility for tasks, and honesty and integrity.
 2. Demonstrate a belief in and emphasis on the human worth of persons with impairment or disability and the importance of their integration into the society at large.
 3. Demonstrate an understanding of and respect for diversity in faculty, trainees, patients, and others in a manner that reflects psychology's ethical principles and professional standards.
 4. Demonstrate a commitment to the ethical principles of Beneficence and Nonmaleficence, Fidelity and Responsibility, Integrity, Justice, and Respect for People's Rights and Dignity
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cialization in rehabilitation psychology occurs at the postdoctoral level, and they described the ABRP competencies required for board certification in this specialty. Cox, Cox, and Caplan (2013) have recently described the specialty competencies in rehabilitation psychology in more detail. Although this current study builds on the existing work to further advance the development of education and training guidelines in rehabilitation psychology, the specification and measurement of competencies in rehabilitation psychology is challenging and remains a work in progress.

The Baltimore Conference developed aspirational guidelines for competency specification and measurement in rehabilitation psychology postdoctoral training (i.e., for studying the outcomes of these training programs). This is congruent with the Institute of Medicine recommendations in the quality chasm series that “[training] programs are required to demonstrate—through process and outcome measures—that they educate students . . . in how to deliver patient care using a core set of competencies” (Committee on Quality Health Care in America, Institute of Medicine, 2001). The specification of key competencies and the development of structured observation items have significant potential strengths in reliability and validity as well as feasibility.

Although the conference did not specify a measurement scale to use with these structured observations, one might consider using a five-point Likert scale such as the following:

- Unacceptable—needs consultation with training director and written plan for remediation.
- Below expected level—identify additional training opportunities for improvement.
- Appropriate for expected level—continue growth.
- Above expected level—identify higher-level training opportunities.
- Superior—identify opportunities for teaching and providing supervision.

These guidelines are conceptualized as noncompensatory (i.e., strength in some areas cannot compensate for inadequacy in other areas); rather, each area of competency should be measured to be adequate in each trainee. However, it is important to emphasize that these are aspirational guidelines for measuring the outcomes of training programs. Although standards are mandatory specifications, guidelines are nonmandatory suggestions or recommendations that are aspirational in nature. They may not be applicable to every situation, and they are not intended to take precedence over the judgment of program-specific education and training faculty or of individuals more generally responsible for education and training institutions. (APA, Board of Educational Affairs, 2004).

The application of these best practices should include (a) using the competency guidelines to design and conduct training program didactic and experiential activities; (b) using the competency guidelines to focus trainees on their expected outcomes; (c) teaching faculty to apply the structured observations reliably and consistently; (d) using the structured observation checklists with each trainee at multiple time points, in multiple settings, with multiple supervisors, to identify areas of strength and weakness; (e) using the results of the structured observations as formative assessments to guide trainee-specific training activities; and (f) using the summed results of the structured observations to compare actual training outcomes in relation to intended outcomes in the context

of program structures and processes, and using these data for program improvement.

Next steps in this process would involve assessment of the psychometric performance of the structured observation items and refinement of the items on the basis of these assessments. This would require using data from multiple training programs, which could be a goal of the newly established Council of Rehabilitation Psychology Postdoctoral Training Programs (Stiers et al., 2012).

These activities can contribute to psychology workforce development in this important area of health care by providing a methodology for measuring training outcomes, for studying how outcomes are related to structures and processes, and for using these data for program improvement. Such methodology can also be useful in developing research agendas for the study of training programs. This work has the potential to improve training practices and increase the skills of rehabilitation service providers; thus, it can enhance the health of the underserved population of persons with disability and chronic health conditions.

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