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BRIEF REPORT

Rehabilitation Professionals Still Do Not Communicate Effectively About Cognition

Erik S. Lande, PhD,[a] Richard L. Wanlass, PhD[b]

From the [a]Department of Counseling, Clinical, and School Psychology, University of California, Santa Barbara, Santa Barbara, CA; and [b]Department of Physical Medicine and Rehabilitation, University of California, Davis, Medical Center, Sacramento, CA.

Abstract

Objective: To examine current use of descriptive labels for levels of cognitive impairment and types of memory to explore whether rehabilitation disciplines are now communicating more effectively.

Design: Survey of rehabilitation professionals.

Setting: Hospital rehabilitation programs.

Participants: Respondents (N=130) representing 8 facilities in 5 states completed surveys.

Interventions: Not applicable.

Main Outcome Measures: Responses to survey questions about severity and types of memory impairment were examined with the Kruskal-Wallis test to determine the impact of profession on ratings. Post hoc Mann-Whitney *U* test comparisons of the 2 professions with the most cognitive assessment experience, psychologists/neuropsychologists and speech-language pathologists, were conducted.

Results: Ratings of various deficit levels differed significantly by profession (mild: $H=39.780$, $P<.000$; moderate: $H=43.309$, $P<.000$; severe: $H=38.354$, $P<.000$), but not by program location. In comparing psychologists/neuropsychologists and speech-language pathologists specifically, we found a significant discrepancy in ratings for percentile ranges associated with the terms mild ($U=103.000$, $P<.001$), moderate ($U=78.000$, $P<.000$), and severe ($U=109.000$, $P<.001$). Disagreement on the meaning of descriptive memory terms was noted among rehabilitation professionals in general, with large percentages of respondents not agreeing on the meanings of terms.

Conclusions: A significant lack of consensus persists regarding the understanding of common cognitive terminology. This miscommunication affects cognitive impairment descriptors (eg, mild, moderate, severe) and categorization of types of memory. Only half of rehabilitation professionals appear aware of this discrepancy, suggesting that education is necessary to bring greater awareness of the potential for miscommunication.

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Medical rehabilitation involves a multidisciplinary team that must collaborate effectively to best treat patients. Accrediting bodies, such as the Joint Commission (an independent organization that accredits and certifies health care organizations and programs in the United States), require evidence of interdisciplinary collaboration in hospital programs.[1] As such, effective communication among members of the rehabilitation treatment team is essential for successful coordination of care in multidisciplinary rehabilitation settings. For example, picture a neuropsychologist reporting in a team meeting that a survivor of a left cerebrovascular accident is exhibiting a mild deficit in long-term verbal memory. The neuropsychologist assumes that the patient has accurately conveyed information that can be used in treatment and discharge planning. The physiatrist and other team members nod, thinking they have understood what kind of memory is impaired and what the level of impairment is. In reality, members of the treatment team may leave the meeting with quite different understandings about the case.

A 1992 study by Wanlass et al[2] that examined communication among rehabilitation disciplines found a significant lack of consensus in the use of common terminology (deficit labels and terms used to describe different types of memory) within and across disciplines. More recently, Guilmette et al[3] found that rehabilitation staff members have difficulty understanding

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cognition and the different domains that it comprises. Guilmette et al[4] documented neuropsychologists' inconsistent use of terminology to describe test performance and pointed out how this can leave consumers, referral sources, and other clinicians confused about the meaning of test results and can also impact outcomes in criminal and civil cases. Other researchers have provided evidence that poor communication can cause significant health care errors, patient harm, and other deleterious effects in various health care settings.[5-7]

In the intervening years since the initial Wanlass study, interdisciplinary collaboration has occurred in an effort to improve some aspects of rehabilitation team communication (eg, an agreement to begin using the term acquired brain injury rather than head injury).[8] More specifically, guidelines have been created to encourage neuropsychologists and speech-language pathologists to better collaborate through coordination of evaluations, develop awareness of guidelines for test usage, and attempt to use the same functional perspective to work with cases.[9] To date, however, no consensus has been reached within or across rehabilitation disciplines on use of descriptive labels for degree of cognitive deficit or type of memory impairment.

Because imprecise communication about cognition can lead to misunderstandings among rehabilitation professionals and negatively impact patient care, we conducted this follow-up investigation to the 1992 Wanlass study.[10-12] This follow-up survey of rehabilitation professionals examined the use of descriptive labels for cognitive impairment (mild, moderate, severe) and use of terms to characterize different types of memory (long term, short term, remote, recent, immediate, working memory) to explore whether there has been any improvement in the common understanding of such terminology since the initial study.

Methods

A total of 130 respondents (58% return rate) representing 8 rehabilitation facilities in 5 states (California, Michigan, Illinois, South Carolina, Virginia) were surveyed about their use of descriptive labels for cognitive impairment (mild, moderate, severe) and use of terms to characterize different types of memory (long term, short term, remote, recent, immediate, working). Of the 130 respondents, 12 were physiatrists, 5 were rehabilitation nurses, 20 were occupational therapists, 34 were physical therapists, 20 were psychologists, 2 were social workers, 30 were speech-language pathologists, 2 were vocational counselors, and 2 were recreational therapists (3 respondents did not specify job type). The response rate and number of respondents were similar to the original study, which had 132 respondents, with a 62% return rate. To best replicate the original study, efforts were made to attempt to use the same facilities, but this was not possible in all cases, and responses from additional facilities were sought to improve generalizability of findings. Similar to the original study, all respondents were involved in the rehabilitation of cognitively impaired patients, with some working in acute rehabilitation settings and others providing postacute rehabilitation services.

Respondents were provided with the same survey that was used in the original study. The survey was composed of 12 questions; however, 2 of the questions required multiple responses. A copy of the survey can be found in appendix 1. Following the same method as the one used in the original study, the survey was provided in paper format to a contact person in each setting who then distributed it to colleagues. The survey was introduced with the following statement, the same statement used in the initial study:

This is a survey of how professionals in rehabilitation settings perceive the meaning of the labels "mild," "moderate," and "severe." For the purpose of this survey, please assume that these labels are being used to describe a patient's level of impairment in some aspect of cognition (eg, memory). You will be asked to state what these labels (ie, mild, moderate, severe) mean to you in terms of percentile ranges. As an example of what is meant here by "percentile ranges," in a group of 100 people, the 10 richest would fall in the 90th to 99th percentile range for wealth, and the 10 poorest would fall in the 0th to 9th percentile range for wealth.

Descriptive statistics were used to characterize responses on survey measures when appropriate. Kruskal-Wallis test comparisons using the 9 independent professional groups (physiatrists, rehabilitation nurses, occupational therapists, physical therapists, psychologists/neuropsychologists, social workers, speech-language pathologists, recreational therapists, vocational counselors) were used to study the impact of professional discipline on the dependent variables of ratings of severe, moderate, and mild deficits. Respondents were asked what percentile range a patient's score would fall within if he/she had mild, moderate, or severe memory impairment. Potential responses were provided in a forced choice format, with 7 percentile ranges to choose from for each impairment label. Mann-Whitney U test comparisons of the 2 professions expected to have the most cognitive assessment experience, psychologists/neuropsychologists and speech-language pathologists, were also conducted.

Results

Most (93.1%) respondents indicated that they make use of the labels mild, moderate, and severe to describe their patients' extent of impairment. Most respondents (98.5%) also indicated that their colleagues use these labels. Half of the respondents (50%) believe that there is a common understanding of the meaning of these labels.

Ratings of deficit levels differed significantly by profession

Kruskal-Wallis test results demonstrated that ratings of the percentile ranges indicative of various deficit levels differed significantly by profession (mild: $H=39.780$, $P<.000$; moderate: $H=43.309$, $P<.000$; severe: $H=38.354$, $P<.000$), but not by location of the rehabilitation program. Table 1 shows the means and SDs of responses associated with each profession.

Post hoc comparisons of forced choice ratings between psychology/neuropsychology and speech-language pathology, the 2 disciplines most likely to conduct cognitive assessments, demonstrated a significant discrepancy in the understanding of the statistical categories underlying the terms mild ($U=103.000$, $P<.001$), moderate ($U=78.000$, $P<.000$), and severe ($U=109.000$, $P<.001$), with speech-language pathologists, on average, generally linking these terms to higher percentile ranges than psychologists/neuropsychologists (table 2).

Same or different types of memory

Respondents were also questioned about their understanding of the meaning and equivalency of different memory terms. In particular, they were asked the following question: Is long-term memory the same thing as remote memory? Similar questions were posed for