The critique of the HRNES in the Handbook of Normative Data for Neuropsychological Assessment

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Abstract

While providing excellent coverage for the norms used in a number of neuropsychological tests, the Handbook of Normative Data for Neuropsychological Assessment (Handbook) singles out for rejection a single set of norms, the Halstead Russell Neuropsychological Evaluation System (HRNES). The stated grounds for this rejection were not applied to any other of the several hundred sets of norms included in the book. The HRNES was rejected even though it fully meets the Handbook’s selection criterion for tests to be included in the book.

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Recently, a large compendium of selected neuropsychological tests has been published as the Handbook of Normative Data for Neuropsychological Assessment (Handbook) by Mitrushina, Boone, and D’Elia (1999). For many years, the authors have been collecting norms for neuropsychological tests. In this book, the authors demonstrate a tremendous effort in collecting the norms for the 17 neuropsychological tests that were included.

This book will certainly be utilized by a large segment of the clinical neuropsychology community in order to obtain norms for clinical usage. As such, it is important for the users of this book to become aware of certain flaws in the book, which could affect the reader’s attempt to obtain adequate norms for their assessments. This article will describe the inconsistencies related to one set of norms, the Halstead Russell Neuropsychological Evaluation System (HRNES; Russell & Starkey, 1993), created by a neuropsychologist whose normative contributions over the years have been utilized by many neuropsychologists and which have

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been published by the Western Psychological Services (WPS; Russell & Starkey, 1993). In this regard, 12 or 70% of the tests in the Handbook (Mitrushina et al., 1999) is contained in the HRNES standardized battery. They are also included in a revision of the HRNES, the Halstead Russell Neuropsychological Evaluation System—Revised (HRNES-R) (Russell & Starkey, 2001). No other battery includes as many of the tests reviewed in the Handbook (Mitrushina et al., 1999) as do the HRNES and HRNES-R batteries (Russell & Starkey, 1993, 2001). Nevertheless, a complication in the Handbook (Mitrushina et al., 1999) is such that it renders this book unusable, in relation to these contributions.

Out of the hundreds of norming studies that were reviewed, the authors of the Handbook (Mitrushina et al., 1999) refused to review tests from only one norming study, the HRNES (Russell & Starkey, 1993). Rather than simply eliminating the tests from the HRNES, they announced their rejection by devoting a paragraph, with exactly the same wording, to various tests from the HRNES in several places in their book (pp. 36–37, 192–193, 217, 237, 456). The reasons for rejecting this single normative study were stated as follows: "This study will not be reviewed in this chapter because the 'normal' group consisted of VA patients who presented with symptomatology requiring neuropsychological evaluation. For further discussion of the HRNES system, see Lezak (1995, pp. 714–715)" (Mitrushina et al., 1999, p. 37).

This quotation provides three criteria for rejecting this one set of norms out of all the other sets in the book. These were: (1) The subjects used for norming were VA patients; (2) they were clinically established normal subjects, who were referred in order to rule out a neurological condition; (3) Muriel Lezak criticized the Russell and Starkey (1993) study (Lezak, 1995, pp. 714–715).

The first reason provided by the authors of the Handbook (Mitrushina et al., 1999) for rejecting Russell and Starkey’s norming study was that it used VA patients. However, there were over 30 other studies in the Handbook (Mitrushina et al., 1999) which also used VA populations. None of the other studies was rejected.

The second reason provided by the authors of the Handbook (Mitrushina et al., 1999) was that the norms used subjects “who presented with symptomatology requiring neuropsychological evaluation” (p. 37). These are subjects who have been referred for a neurological examination but a complete examination, utilizing all tests which the neurologist deemed necessary, revealed no neurological condition. The hospital diagnosis was a negative neurological examination. Most of the authors of such normative studies present evidence that the patients, in fact, did not have any neurological condition at the time that they were tested, although they may have had psychosomatic symptoms or were merely concerned about their memory. In regard to the norming of the HRNES, the updated records of the subjects were reexamined to verify that no neurological condition, which may have been unrecognized in the original neurological examination, had become evident. This reexamination was done at a minimum of 1 year after the initial neuropsychological testing.

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1 A list all of the VA studies that are reviewed in the Handbook follows. Due to the space that would have been required, only the pages on which the studies are described will be listed. In a few cases, the author has knowledge that the study used VA patients even when it was not described as such. 42, 62, 183, 198, 210, 212, 222, 230, 232, 243, 245, 249, 257, 259, 275, 290, 307, 333, 334, 336, 350, 391, 397, 401, 402, 404, 406, 424, 426, 445, 461, 471, 473. Total 33.
Again, Russell and Starkey’s study was the only study in the Handbook (Mitrushina et al., 1999) that was rejected on these grounds, even though the Handbook (Mitrushina et al., 1999) reviewed at least 47 other normative studies that contained some neurologically normal subjects. In many cases, the Handbook did not provide sufficient information to determine whether or not subjects had been referred for a neurological examination. Although the authors of the Handbook stated that these studies used patients that were negative for brain damage, or called them “clinical comparison groups” (e.g., p. 312), they never suggested that this constituted a reason for removing any of these other studies from their book.

In regard to the third reason—that Lezak (1995, pp. 714–715) criticized the study—a published rebuttal of Lezak’s critique of the study (Russell, 1998) was not mentioned in the Handbook (Mitrushina et al., 1999). Russell’s (1998) rebuttal was published a year before the Handbook was published and Lezak wrote a foreword to the Handbook (Mitrushina et al., 1999, pp. vii–viii). In Russell’s examination of Lezak’s (pp. 709–713, 714–715) analysis of the HRB and the HRNES, it was demonstrated that Lezak’s critique was almost entirely unfounded (Russell, 1998). Lezak never published a response to Russell’s review.

In addition, for some unexplained reason, while the Handbook (Mitrushina et al., 1999) rejected the Russell and Starkey HRNES norms for the Trail Making Test, Rhythm Test, Speech Sounds Perception Test, the Tactual Performance Test, and the Category Test, it did not reject the HRNES norms derived from the same normative study for the Wechsler Memory Scale (pp. 307–309), the Finger Tapping test (p. 406), the Grip Strength Test (p. 426), and the Grooved Pegboard (p. 445). One wonders why exactly the same set of norms (Russell & Starkey, 1993) was too flawed to be included in one section of the book but was not too flawed to be included in another section.

Finally, the authors of the Handbook (Mitrushina et al., 1999) presented a set of four criteria (pp. 9–10) for regarding a set of norms “as being in standard use” (p. 9). If three of the four were met, then the norms would be considered to be in standard use. Consequently, it is evident that they utilized these standards in selecting the norms to be published in their book. Russell and Starkey’s (1993) norms met all four of these criteria. These criteria were: “(1) The test must be readily available to the professional community and adequately normed” (p. 9).

The HRNES (Russell & Starkey, 1993) and its revision, the HRNES-R (Russell & Starkey, 2001), are published by WPS. “(2) The test stimulus and materials should be standardized. A manual describing test administration and scoring procedures and providing information on reliability and validity should be available” (p. 10). The manual providing this information is available from WPS. “(3) Research using the test must have been peer-reviewed and published in recognized professional journals” (p. 10). There is extensive peer-reviewed literature concerning this battery both for parts and as a whole (as examples, see Russell, 1987, 1988, 1998, 2000). “(4) The test has been reviewed in the Mental Measurements Yearbook…” (p. 10). It was favorably reviewed in the Mental Measurements Yearbook (Mahurin, 1995, pp. 447–451; Reztlaff, 1995, pp. 451–453). In addition, these norms met the requirements for the Standards

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2 A list all of the neurologically negative studies that are reviewed in the Handbook follows. Due to the space that would have been required, only the pages on which the studies are described will be listed. 42, 55, 62, 167, 180, 183, 194, 198, 210, 212, 218, 221, 222, 230, 232, 239, 243, 245, 249, 257, 259, 288, 290, 291, 292, 295, 296, 307, 333, 334, 336, 391, 391, 392, 397, 401, 402, 404, 406, 424, 426, 445, 460, 461, 461, 471, 473. Total 47.
for Education and Psychological Testing (AERA, et al., 1999). Nevertheless, this set of norms was singled out to be excluded from the Handbook (Mitrushina et al., 1999) on the basis of criteria that were not applied to any other set of norms.

References


