PRACTICAL RESOURCES for the Mental Health PROFESSIONAL

WISC–III

Clinical Use and Interpretation

Scientist–Practitioner Perspectives

Edited by

Aurelio Prifitera and Don Saklofske

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SCIENTIST-PRACTITIONER PERSPECTIVES

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FOR THEIR LOVE AND SUPPORT NEEDED TO PURSUE OUR PROFESSIONAL ASPIRATIONS, THIS BOOK IS DEDICATED TO

My wife Loretta Gertrude, and daughter, Sarah Marie—AP

My sister Bette, brother Brent, and aunt Audrey—DHS

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PREFACE

The Wechsler Intelligence Scale for Children–Third Edition (WISC-III) continues to be the most widely used measure of cognitive functioning by clinicians and researchers in the United States and around the world. Because of its widespread use and linkage to its predecessors, much is already known about the psychometric properties of the WISC-III and how to interpret the test scores. This book contains new research information and in-depth clinical perspectives that will be of use to researchers and practitioners alike. We believe that the best clinical practices stem from an adherence to the scientist–practitioner model, which is based on a knowledge of research relevant to the use of the WISC-III for the particular groups as well as the sensitive use of test data within the context of a particular person. Tests usually are not in themselves diagnostic. Rather, it is the clinicians using tests as part of their assessment activity who are responsible for diagnostic decisions.

Unlike other books that focus mainly on the interpretation of the Wechsler tests, this book is a collection of perspectives of experts in specific clinical areas rather than the interpretative schema of one author. These multiple perspectives are certainly a strength, but the fact that they may not always be consistent should not be cause for alarm. Out of multiple perspectives can come a broader view of issues that can lead to better practice. The editors asked the chapter authors to review and present the research literature as it relates to the assessment of intelligence for the particular special group that is the topic of their chapter. Most chapters contain case studies that illustrate the authors' treatment of WISC-III data within the context of the chapter's topic.

One of the main themes highlighted in all chapters is that good assessment involves much more than testing and assembling test scores. The emphasis on sound justification for one's interpretation of test results within the context of the individual's personal history is apparent throughout this volume. It is the encouragement

of this theme as an integral part of how clinicians approach WISC-III data (and all psychological test data) that we hope will be the impact of this volume on assessment practice. All too often interpretation of test data ignores the context of the scores within an individual's life history and is not grounded in the relevant research supporting or not supporting interpretations. On the other hand, research is often narrowly focused on one aspect of the test and ignores the clinical richness within which test scores are embedded.

The process approach to neuropsychological assessment mentioned in Dr. Kaplan's appendix in Chapter 1 reminds us of the multifactorial nature of all behaviors, including test responses. After all, a standardized test is in many ways a standardized clinical interview in which the sensitive clinician observes behaviors as well as records responses and objectively scores the test. It is the understanding of test scores, the observation of behaviors, and the contextually sensitive integration of this information that make for good professional assessment. Test scores cannot take the place of the clinician or alleviate the clinician of the task of taking a perspective and rendering his or her professional judgment. It is our intent that this volume serves as a reminder that the integration and blending of the research and clinical data are part of what is always done in the practice of responsible assessment. It is also often necessary to rely on one's best professional judgment when the research literature and previous clinical experience cannot help us with a particular case. David Wechsler, the astute clinician, probably would have been less interested in the test score and more interested in how and why the individual arrived at his responses. Good assessment leads to better understanding of the person, and to the extent that this volume aids in such a goal, we consider it successful.

We have sought to present chapters that examine the most frequent childhood disorders and clinical groups for which the WISC-III is used as part of an overall assessment. In addition, several chapters are thematic and deal with general issues of test use and interpretation. These chapters all discuss the importance of placing the WISC-III (or any other test for that matter) within the context of a full assessment and not as an end in itself. Psychological tests are powerful tools that can help the clinician better understand an individual, which in turn can be used to the benefit of the individual being tested. This has to be our first obligation.

We thank the authors who wrote the quality chapters found in the following pages. These outstanding contributors not only shared their research expertise and knowledge but also demonstrated the clinical sensitivity that enhances the utility of the WISC-III in the assessment of children. They both captured and created the scientist–practitioner theme of this book. Nikki Levy of Academic Press has patiently and professionally supported this project from the idea stage to publication. The Psychological Corporation and the University of Saskatchewan provided the scientific and professional environments necessary to ensure the completion of this book. Finally, special thanks to our families for their continuing support of our professional quests.

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THE WISC-III IN CONTEXT

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INTRODUCTION AND OVERVIEW OF THIS CHAPTER

Unlike what one might usually expect in a first chapter in a volume such as this, the intent of this chapter is not to give an extensive overview and description of the Wechsler Intelligence Scale for Children—Third Edition (WISC-III) (Wechsler, 1991). Because of its widespread use by practitioners and researchers, its properties are well known, and full descriptions of the scale can be found in other sources (e.g., Anastasi & Urbina, 1997; Kaufman, 1994; Sattler, 1988, 1992; Wechsler, 1991). The purpose of this chapter is to highlight several critical elements that will be of benefit in the interpretation of the scale and understanding what the scale is best suited for. Therefore, topics addressed will be selective based on what the authors believe are issues that are often not well understood or neglected when using and interpreting the test.

To that end, we will provide a brief description of the scale and rationale for its revision; we will then discuss selected topics that we hope will assist practitioners

and researchers with interpreting the results of the scale, including the role of the WISC-III *as part* of a psychological assessment rather than an end in itself, its role in diagnosis, its utility and validity in other countries and with minority groups, and approaches to subtest and scale interpretation. These topic areas were selected either because they are not discussed in detail to date in the available literature (e.g., performance of minority groups on the WISC-III) or to elaborate on the utility of tests in general but IQ tests in particular within the context of an assessment. All too often the assessment is viewed as synonymous with testing and diagnosis is viewed as synonymous with test scores, which we strongly propose are misguided assumptions in both clinical work and research.

DESCRIPTION AND RATIONALE FOR THE REVISION

The WISC-III, published in 1991, is the latest revision of the scale that has its roots in the Wechsler Bellevue Form II published in 1946 by Wechsler. The predecessor of the WISC-III, the Wechsler Intelligence Scale—Revised (WISC-R) was published in 1974. The WISC-III, like its predecessor the WISC-R, continues to be the most widely used assessment of intellectual functioning of children (Reschly, 1997). As is evident by the chapters in this volume, it is used in a variety of ways and for a variety of purposes in clinical evaluations and for other types of assessments. Its strength has been its robustness and its ability to provide valuable information in a wide variety of assessments including neuropsychological assessments—a field that was in its infancy when Wechsler began developing his scales. (See Appendix A at the end of this chapter for a brief discussion by Dr. Edith Kaplan of an approach using the WISC-III as a neuropsychological instrument).

All tests need revision from time to time and the Wechsler scales are no exception. One of the primary reasons is that scores become inflated over time and norms need to be reestablished. This phenomenon is well documented and has been referred to as the Flynn effect (Flynn, 1984). Therefore, one of the primary reasons for revising the WISC-R was to develop current norms that would give more precise scores for individuals. Changes in test materials and items to make them more contemporary and attractive to examinees was another reason for the revision. Also, items were reviewed for bias and either modified or replaced to make the test fairer. In addition, exploration and attempts to clarify the factor structure of the scale was undertaken. Since the original factor analyses of the Wechsler scales conducted by Cohen (1957, 1959), there has been debate whether the WISC and other Wechsler scales are best described in terms of one, two, or three factors. There has been much controversy about the third factor, which was named "freedom from distractibility" by Cohen. It is now fairly well accepted that this third factor is not a pure measure of distractibility or inattention even though it is often interpreted in that fashion (Kaufman, 1994; Wielkiewicz, 1990). A new subtest, Symbol Search was added to WISC-III with the intent to help better iden-

tify what the third factor measures. However, the addition of this subtest resulted in a four-factor solution, with a new factor called "processing speed."

There has been some difference of opinion among both researchers and clinicians over the four-factor solution and the use of the four index scores as an alternative to the traditional Verbal IQ, Performance IQ, and Full Scale IQ scores. Sattler (1992), for example, suggests that a three-factor solution is more appropriate using the criterion of eigenvalues greater than 1 to determine the number of factors to interpret. Reynolds and Ford (1994) concluded that a three-factor solution is most consistent across the age range. Other analyses using both exploratory and confirmatory factor analyses (Roid, Prifitera, & Weiss, 1993; Roid & Worrall, 1996; Wechsler, 1991) have found evidence for the four-factor solution in the original WISC-III standardization sample and have replicated it in other samples as well. Also, Blaha and Wallbrown (1996) found support for the four-factor solution. However, other studies have found a three-factor solution more appropriate for children of Hispanic origin (Logerquist-Hansen & Barona, 1994).

One reason that there continues to be controversy over the factor structure is that there is a difference in using factor analysis as the sole criteria for determining how many factors to interpret in contrast to using factor analysis as a tool to inform how best to interpret relationships among subtests and examine what latent underlying abilities groups of subtests may have in common. Analysis of the WISC-III subtests and factor structure has found that there are differences among clinical groups in their patterns of subtest and factor scores. For example, children with mental retardation show consistent scores across the first three Index scores but have an elevated Processing Speed score on the WISC-III. Children identified as gifted, however, show a relatively lower score on the Processing Speed Index (PSI) compared to scores on the first three factors, which are about equal to each other (Wechsler, 1991). Looking at groups with learning disabilities and attention deficit disorders (ADD), Prifitera and Dersh (1993) found relatively lower scores on the Freedom from Distractibility Index (FDI) and PSI scores compared to the normal population and a high base rate of the ACID Profile. These results for learning disabled (LD) and attention deficit–hyperactivity disorder (ADHD) groups are similar to those reported in other research (Schwean, Saklofske, Yackulic, & Quinn 1993; Thomson, 1991; Wechsler, 1991).

More evidence for the validity of the four-factor structure is reported in a recently published study by Donders (1997) who found that the Perceptual Organization Index (POI) and PSI indexes are depressed in children with traumatic brain injury compared to the other scores. Also, depressed scores on these two indexes are relatively uncommon in the WISC-III standardization sample. Later in this chapter, analysis of minority group data also provides evidence for the use of these scores. The point of citing these studies is to suggest that by not including the four-factor structure, one would miss some very important information about these groups and individuals. So one must look at not only the various factor analytic criteria one uses to determine how many factors make sense but also the psychological meaningfulness of the factors (Snook & Gorsuch, 1989), as well as clinical information.