

Facilitating Test Anxiety Research

Test Anxiety: Applied Research, Assessment, and Treatment Interventions (2nd ed.)

by Marty Sapp

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Review by Andrew J. Elliot and Anthony Capobianco

Test anxiety may be defined as the experience of evaluation apprehension during the examination process (Spielberger & Vagg, 1995). Researchers have investigated test anxiety since the beginning of the 20th century (see Folin, Demis, & Smillie, 1914), and over the years the test anxiety literature has burgeoned to the point that there exists a substantial empirical and theoretical body of work in this important area of inquiry. *Test Anxiety: Applied Research, Assessment, and Treatment Interventions (2nd ed.)* is a unique addition to the literature. This book essentially represents a practical handbook or sourcebook for individuals interested in conducting test anxiety research, particularly those focusing on treatment intervention and evaluation.

There is much about this book to commend, but also much about it that is puzzling, frustrating, or both. Generally speaking, the book is incredibly well-written. Of course, by well-written, we do not mean that the writing is impressive in its grammatical correctness or uses exquisite prose reminiscent of John Updike; rather we mean that within the genre of technical scientific writing, the author communicates in a strikingly clear, straightforward, and, importantly, concise manner. Also, the book includes a wealth of information about test anxiety research. For those interested in beginning to conduct test anxiety research of any sort, this is clearly a good resource to have on the shelf, as it covers most of the primary topics that make up the test

anxiety literature and is reasonably well-referenced.

Unfortunately, the wealth of information presented in the book is often poorly organized. For example, toward the latter part of the book, there is a good deal of coverage of general issues in the test anxiety literature (e.g., development, ethnicity differences), and there is little attempt made to demonstrate how these broad issues are related to the topic of treatment and evaluation. Although the information provided is interesting and important, its inclusion represents a deviation from the main aim of the text and serves to distract the reader, if not derail him or her completely. An additional weakness is rooted in the fact that the book attempts to address two very distinct groups of individuals: those interested in conducting test anxiety research and those desiring to be practitioners who assist students suffering the debilitating effects of test anxiety. In our opinion, the book does a rather nice job of addressing the former group, but we suspect the latter group will find the coverage a bit meager and less than satisfying. Both of these weaknesses may be summarized by noting that the book attempts to accomplish too much, sometimes to the detriment of presentation clarity and thoroughness of coverage.

The book is divided into four different sections: Applied Research, Measurement Issues, Assessment, and Treatment Interventions. Each of these sections is quite distinct in style and substance, thus, we will comment on each independently.

The first part of the book (on applied research) makes up nearly two thirds of the entire monograph. It is thorough, well-organized, and clearly represents the strongest part of the book. There is something here for nearly all levels of reader: for those just beginning to learn the basics of applied statistics and research methodology, there is an introduction to such elementary concepts as independent variables, dependent variables, and central tendency, and for the more advanced reader, there is coverage of topics such as nested designs and procedures for cross-validating results in multiple regression analysis. One feature we found particularly valuable was the frequent dispensing of practical advice for the researcher, such as when to use certain types of statistics and when violations of assumptions matter and when they do not. In this sense, this section of the book is somewhat analogous to Tabachnick and Fidell's (1996) *Using Multivariate Statistics*—a book treasured by many an applied statistician for its practical guidance. The market for statistics texts is replete with good texts for teaching basic and, increasingly, even advanced statistics, but there is a clear lacuna when it comes to the area of pragmatic advice for researchers slugging it out in the empirical trenches. Sapp's book, like Tabachnick and Fidell's (1996), takes a step toward filling the void.

It is important to highlight the unusual nature of this first section. In essence, this section is a brief overview of applied statistics and research methods (in general) with all concrete illustrations presented in the context of the test anxiety literature. Certainly for those who decide on

MARTY SAPP, Department of Educational Psychology, University of Wisconsin—Milwaukee.

ANDREW J. ELLIOT and ANTHONY CAPOBIANCO, Department of Clinical and Social Sciences in Psychology, University of Rochester. Correspondence concerning this review may be addressed to Andrew J. Elliot, Department of Clinical and Social Sciences in Psychology, University of Rochester, Meliora Hall, RC, Box 270266, Rochester, New York 14627-0266. Electronic mail may be sent to andye@scp.rochester.edu.

test anxiety as a content area and then proceed to learn statistics and methods, such a format is optimal, but of course, most individuals do not select test anxiety as a content area, and indeed most learn statistics and methods prior to choosing a content area of interest. However, this raises an interesting question: Is it better (e.g., easier) to learn statistics and methods with illustrations from a multitude of research areas (clearly the pedagogical assumption underlying most texts in this niche), or is it better if the content area of the illustrations is kept constant while presenting the various statistical and methodological concepts? If the former is better, the target audience for Sapp's book is rather small, but if the latter is better, the target audience for Sapp's book expands tremendously. We suspect most professors would answer that the former is better, but students may offer a different opinion.

The second part of the book (on measurement issues) is a stark contrast to the first, in terms of both length (it is only 38 pages long) and quality. The first part of the book is the strongest, making this part the weakest. The first chapter in this section begins by stating that there are currently three approaches that dominate measurement theory: classical test theory, item response theory, and generalizability theory. A few brief paragraphs are then devoted to describing classical test theory and generalizability theory inclusive, prior to several pages of discussion on item response theory, and finally, the presentation of an entire research study (including introduction, method, results, tables, and discussion) that uses item response theory. Nowhere in the chapter is the reader provided with an explanation as to why item response theory receives such dramatically disproportionate treatment, nor is the reader given a rationale for the presentation of an entire empirical study in an overview chapter on measurement issues. Furthermore, the author of the study is never identified, leaving the reader to surmise

that it must be the author of the book.

The second chapter of this section provides an overview of structural equation modeling (SEM) techniques. The test anxiety literature has been greatly influenced by SEM techniques during the past decade, so this is clearly an important area to cover. Unfortunately, the coverage of this popular statistical approach is extremely brief and sporadic. Only a small portion of the basics of SEM is presented (in contrast to the coverage of other statistical approaches in Section 1), and the choice of what is covered seems rather arbitrary. For example, two different model modification indices are introduced, but there is no discussion of the more basic concept of the fit index. In addition, no rationale is provided for why SEM is placed in a separate section on methodological issues, rather than being placed with all of the other statistical techniques covered in Section 1. SEM is certainly applicable to measurement issues, but it is also applicable to other issues beyond measurement (see Covington & Omelich, 1988; Elliot & McGregor, 1999), including those directly relevant to treatment and intervention. Finally, in overviewing SEM in this context, it would have been nice if the author had offered his opinion on the place of this statistical technique in the current test anxiety literature. Our own view is that the recent trend toward reliance on SEM is both a positive and negative development. It is positive in that it affords an excellent technique for investigating the validity of various multidimensional conceptualizations of the test anxiety construct, and it allows indirect and mediational path models to be tested in simultaneous fashion; it is negative in that the availability of this powerful technique seems to have impelled test anxiety researchers to focus so heavily on measurement issues (the trees) that there is relatively little focus on broader theoretical issues (the forest). To some degree, this critique may be offered of the test anxiety literature throughout much of its existence, but the current reliance on

SEM techniques seems to have simply exacerbated the trend.

The third part of the book (on assessment) overviews a variety of issues in the test anxiety literature including how test anxiety is defined, the development of test anxiety, the measurement of test anxiety in children and adults, the consequences of test anxiety, and various conceptualizations of test anxiety. Each of the discussions is interesting and informative. The overview of popular test anxiety measures in the field is of particular value, in that the author not only describes each measure and provides reliability and validity information, but presents the actual items as well. This is a highly valuable compilation for test anxiety researchers, as such measures are scattered across the literature and are often difficult to access. Missing from this section is an explanation of how the various issues that are overviewed are linked to each other and, more importantly, are linked to treatment and intervention. Accordingly, this section reads like an assortment of separate overviews with no organizational theme tying them together.

The fourth part of the book (on treatment interventions) presents an overview of several intervention techniques that may be used with individuals who experience test anxiety. In fact, a few specific intervention techniques are described in extensive detail, giving the reader a clear sense of what such procedures entail. The cost of focusing on a few of the techniques in detail is that breadth of coverage is sacrificed, to some degree, for depth of coverage. There are a large number of intervention techniques that have been utilized to treat test anxiety, and many of these are simply noted in passing. Furthermore, no rationale is provided to explain why the particular techniques that are described in detail were chosen over others. Do these represent the most popular approaches? Are these supposed to be a representative sampling of approaches? The reader would clearly benefit if such a rationale were provided and, in related fashion, information regarding which

treatments are most popular and effective would also be a welcome addition.

Test anxiety is an important area of inquiry, and applied issues such as how to intervene when people are experiencing test anxiety and how to evaluate the efficacy of intervention procedures certainly warrant top priority in this literature. Despite possessing some limitations, we view *Test Anxiety: Applied Research, Assessment, and Treatment Interventions* (2nd ed.) as a good resource for researchers, particularly those interested in beginning work in this field. In this monograph the reader may not find a tightly organized, balanced treatment of the content area under consideration, but he or she will find a valuable handbook consisting of a compilation of tools and information that will facilitate the research process. □

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portion of the life course that consumed a greater number of years than any other, developmental scholars scrambled to correct the oversight. Midlife is now a fashionable area of inquiry. *Life in the Middle: Psychological and Social Development in Middle Age* embodies the current vogue.

However, this brief historic view does not tell the entire story. Even in the years before life span developmental theory gave new cachet to the study of adulthood, there were some scholars who demonstrated an interest in adulthood and in midlife in particular. The exemplar was Bernice Neugarten. As Willis and Reid point out in their Preface, the classic book she produced on middle age (Neugarten, 1968) provided a starting point for more recent students of midlife. However, such thoughtful works were the exception in the 1960s and 1970s. Middle age consistently received more attention from the popular press than from academia, as evidenced by the media's fixation on the myth of the midlife crisis. But times change, and intellectuals are now allured by middle age.

The Emerging Study of Midlife

Life in the Middle: Psychological and Social Development in Middle Age
by Sherry L. Willis and James D. Reid (Eds.)

San Diego: Academic Press, 1999. 304 pp. ISBN 0-12-757230-9. \$59.95

Review by Daniel K. Mroczek

There was a time when developmental psychology was synonymous with child psychology. Through the 1960s, there was a view held that very little psychological development transpired beyond the childhood years, let alone during middle age. Then a new perspective emerged: life span theory, which gained momentum in the 1970s and transformed developmental thought. This new view held that no segment of the life span has a corner on the market with regard to the occurrence of systematic change. Developmentally significant changes can happen at any point along the life span.

With the theoretical floodgates open, new subdisciplines were born and other disciplines began to prosper. Gerontology perhaps fared the best under the new regime but other subfields focusing on a particular portion of life, such as adolescence and young adulthood, flourished as well. By the late 1980s, every piece of the human life span had a sizable academic following, except midlife. Lachman and James observed that "the middle years of adulthood have often been overlooked" (Lachman & James, 1997a, p. 1) and Brim called midlife the "last uncharted territory of human development" (Brim, 1992, p. 171). Realizing they had ignored the

Old and New Thought

The fact that midlife is such virgin ground represents a mixed blessing. On the one hand, the area is fresh and open. On the other hand, the subfield is too new to have a well-formed identity. This lack of scholarly history apparently led many of the chapter authors to fall back on what they know best. Many chose to write on topics or theories they know well, subsequently applying this knowledge to midlife. This is a top-down approach that ends up awkwardly forcing issues of midlife into preexisting schemes. Yet, we may expect

SHERRY L. WILLIS, Department of Human Development, Pennsylvania State University.

JAMES D. REID, Department of Psychology, Washington University.

DANIEL K. MROCZEK, Department of Psychology, Fordham University, Rose Hill, 441 East Fordham Road, Bronx, New York 10458. Electronic mail may be sent to mroczek@fordham.edu.