

**THE MEASUREMENT OF  
ATTITUDES TOWARD PEOPLE  
WITH DISABILITIES**



# THE MEASUREMENT OF ATTITUDES TOWARD PEOPLE WITH DISABILITIES

Methods, Psychometrics and Scales

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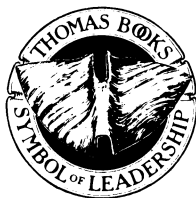
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## FOREWORD

ATTITUDES toward disabled persons are complex and multifaceted. Many perspectives are possible. Data indicate that it is difficult to measure, change, and even to understand attitudes toward disabled persons. Even though these things are difficult, they must be done in order to improve the quality of life and status of persons with disabilities.

The field of attitudes toward disabled persons is becoming increasingly professional. There are fewer persons willing to discuss attitudes toward persons with disabilities based on their impressions, without being familiar with the extensive literature dealing with the topic. Similarly, there is increasing recognition of the importance of being knowledgeable about psychometrically adequate ways of measuring attitudes.

In the past 40 years there have been many studies dealing with attitudes toward persons with disabilities. Various measures of attitudes toward persons with disabilities have been developed. The early scales tended to be simple, often psychometrically inadequate, instruments which measured attitudes toward specific disabilities such as blindness or deafness. Then, beginning in the 1960s, more psychometrically adequate research instruments were developed. Two of the most used instruments, the Attitude Toward Disabled Persons scale (ATDP) and the Opinions about Mental Illness scale (OMI), both were developed in the early 1960s, and are still extensively used.

Despite the research that has been done there are still many unanswered questions. We need to investigate the sources of attitudes, seeking to specify the relative influence of variables such as culture, personal experiences, the teachings of significant others, and intrapsychic personality variables. We need also to obtain data pertaining to the attitudes of persons such as parents, rehabilitation and treatment personnel, teachers, friends, and classmates. Since members of each of these groups interact with and influence persons with disabilities, knowledge of their attitudes and the ways their attitudes and behaviors influence the behavior of disabled persons is of major significance.

There is also a need for research dealing with the relationship between attitudes and behavior. How do the attitudes of non-disabled persons influence their

behavior toward disabled persons, and how do the attitudes of disabled persons influence their own behavior, their behavior toward disabled persons, and their behavior toward non-disabled persons? Programmatic research dealing with attitude change could be particularly informative. The programs should be multidimensional, using a combination of techniques. They should last more than a few hours or a few days, and should include follow up data.

All of these important types of research are dependent upon having psychometrically adequate measures of attitude. As indicated above, some of the measures developed in the past are pretty good, many are psychometrically inadequate. Before this volume was published, there was no single good source of information about the best and most used measures. Yuker, Block, and Young (1966) presented a brief review of instruments developed prior to 1964, but it related only to physical disabilities, and is out of date today. Shaw and Wright (1967) provided limited information and copies of a few scales. After that there was nothing. This volume represents the first attempt to summarize and describe the major research instruments that have been used. Each instrument is described in detail, its psychometric properties are specified and evaluated, and recommendations for its use are given. The authors' comments are useful and provide information about some of the inadequacies of each of the scales.

Attitudes toward persons with disabilities have changed over the years, at least partly as a consequence of legislation relating to discrimination against persons with disabilities, the mainstreaming of children in school, and, to a certain extent, the mainstreaming of disabled persons into society. Attitude measurement techniques also have changed. They have become increasingly sophisticated and currently the emphasis is on multidimensional scales. As Antonak and Livneh point out, these changes mean that some of the items on some of the older instruments are no longer meaningful or pertinent. This implies that it is necessary to either modify existing scales or develop new ones. In either case, the scales must be developed carefully, and their reliability and validity must be assessed. The new or modified scales should reflect the multifaceted nature of attitudes.

My belief is that it is better to try to improve old scales than to develop new ones. It is also less expensive and less time consuming. We should emphasize the cumulative nature of knowledge and build on the past, as is done in the sciences. As Antonak and Livneh point out in their final chapter, it is better to "refine rather than create scales," and to "update old scales."

This has often been ignored in the past. One of the disturbing characteristics of past attitude research has been the tendency of researchers to develop their own scales. This was particularly true of much of the doctoral research in the 1960s and 1970s. Although standardized scales were available, they were not often used. Few of the new scales that were developed used adequate procedures or were psychometrically evaluated for reliability and validity. Almost none of them were used more than once.

In the event that none of the existing measures are satisfactory, nor appropriately modifiable, this volume provides guidelines that can be used to develop

new scales. It supplies information about the procedures to use in developing psychometrically adequate measures. If those procedures are followed, the new scale will be a good one. The procedures are, however, tedious, expensive, and time consuming.

The recommendations given in the last chapter are so important that they could profitably be read prior to reading the rest of the book. These recommendations include emphases on reporting the psychometric qualities and correlates of the scales, using multidimensional scales, and investigating attitude-behavior relationships.

This book is an excellent reference source. It should be useful to everyone engaged in research dealing with attitudes toward persons with disabilities. The information and commentary about the major scales currently being used, together with copies of the scales, and addresses of the scale authors will be of major value to researchers. By providing information about the current state of the field, this volume provides a good launching platform for future research and development in the area of attitudes toward persons with disabilities.

Harold E. Yuker





## PREFACE

IN JUNE 1986, a conference on attitudes toward people with disabilities was held at Hofstra University. The conference agenda was organized by Professor Harold E. Yuker, the primary author of the Attitude Toward Disabled Persons Scale, and the Director of the Center for the Study of Attitudes Toward Persons With Disabilities at Hofstra University. This three-day conference brought together 22 theorists and researchers from across the United States and from three foreign countries. Over three days, these scholars discussed a range of theoretical, methodological, and practical issues involved in the measurement of attitudes toward disabled people. The majority of the presenters at the Hofstra University Conference submitted manuscripts to Professor Yuker who edited them into a publication (Yuker, 1987) which will be a significant resource for many years for researchers investigating topics in this attitude domain.

From our own research and reviews of the measurement literature in preparation for our presentations at the Hofstra University Conference there was an apparent need for a comprehensive source book of information on the availability and suitability of scales used to measure attitudes toward people with disabilities. This observation was confirmed by comments made in the addresses of several of the presenters, and through informal conversations with many of the participants. In all too many cases, important research questions are investigated with unsophisticated research designs using instruments of dubious psychometric adequacy. Any conclusion based on data obtained in such a study must be cautiously considered. In an attempt to provide the needed information, we offer this book as a modest contribution for researchers and practitioners in a variety of disciplines who are concerned with the measurement of attitudes toward people who are disabled. We hope that this book will be of value to those who are involved with the study and elimination of attitudinal barriers to the acceptance and integration of people who are disabled into our nation's schools, communities, and workplaces.

This book is divided into four parts. The first part, Attitude Measurement Methods, consists of five chapters. An introductory chapter provides a discussion of a variety of definitions of attitude, outlines reasons why the study and measurement of attitudes are important, and presents a brief history of the measurement of attitudes in general, and of attitudes toward people who are disabled in particular. Chapter 2, Fundamentals of Attitude Measurement, presents a taxonomy for

the classification of various attitude measurement methods. Discussion of important measurement concepts will provide the reader with a foundation for understanding the remainder of the chapters in this first part of the book, and is indispensable for an understanding of the advanced measurement concepts presented in the chapters of Part II. The chapter concludes with guidelines for the selection of an appropriate scaling method.

Chapter 3, *Direct Methods of Attitude Measurement*, discusses those methods in which the respondents are aware that they are participating in an attitude measurement experiment. Ten direct methods are examined in detail: opinion surveys, interviews, rankings, Q-methodology, sociometrics, adjective checklists, paired comparison scales, semantic differential scales, probabilistic rating scales (summated ratings, consensual location, social distance, and scale discrimination), and deterministic rating scales (scalogram analysis and order analysis). A brief description of each method is presented, together with a general means for constructing a scale by that method. This is followed by examples of each method.

Chapter 4, *Multidimensional Scaling*, is an invited chapter provided by Professor Liora Pedhazur Schmelkin. This chapter first considers the limitations of the direct measurement methods, discussed in Chapter 3, which focus on unidimensional measurement paradigms. The newer multidimensional paradigms hold the promise of identifying salient organizing dimensions underlying the perceptions of disabilities and disabled people by focusing on a larger number of disabilities concurrently, and by using a methodology which is less constraining. The chapter then discusses nonmetric multidimensional scaling (MDS) procedures, and presents two examples of research using MDS to investigate perceptions of disabilities. The chapter concludes with a discussion of considerations relevant to MDS studies and suggestions for the use of MDS in disability attitude research.

The final chapter of Part I, *Indirect Methods of Attitude Measurement* (Chapter 5), begins with a discussion of the weaknesses of the direct attitude measurement methods discussed in Chapters 3 and 4. Indirect attitude measurement is then defined and its strengths and weaknesses discussed. This is followed by a presentation and discussion of four indirect measurement methods: projective techniques, disguised procedures, behavioral observations, and physiological methods. Illustrations of each method are provided.

Part II, *Psychometric Guidelines for Attitude Scales*, consists of three chapters concerned with the psychometric adequacy of attitude scales. The first of these chapters, *Reliability* (Chapter 6), begins with a definition of reliability and a taxonomy for the classification of various reliability estimates. This is followed by a discussion of indices in the following reliability categories: stability, equivalence, stability-equivalence, internal consistency, and inter-judge (or inter-rater). The chapter continues with a discussion of the concept of the standard error of measurement of scores and its interpretation and usefulness as a psychometric index. The chapter concludes with a discussion of the factors known to effect reliability estimates of an attitude scale.

Chapter 7, *Validity*, begins with a definition of validity and a taxonomy for the classification of various validity estimates. This is followed by discussions of indices in three validity categories: content, criterion-related, and construct. The chapter concludes with a discussion of the factors known to effect the validity estimate of an attitude scale. The second part of the book closes with *Psychometric Characteristics of Attitude Scales* (Chapter 8). This chapter presents detailed guidelines for the psychometric adequacy of rating scales. This presentation has two purposes: (a) to assist the researcher who is seeking a previously constructed rating scale in reviewing available scales, and (b) to assist the researcher who is unable to locate a rating scale in the process of constructing a new rating scale. The topics discussed in this chapter include: item preparation, pilot studies, item analyses, scale analyses (including investigations of the dimensionality of the scale), the influence of response styles on scale scores, and the presentation and use of normative data.

Part III, entitled *Scales for the Measurement of Attitudes*, is composed of five chapters. The purpose of the chapters in this part is to provide specific technical information on 22 attitude scales organized into five areas. Chapter 9, *General Attitudes Toward People With Disabilities*, presents and discusses six scales, all of which attempt to measure attitudes toward disabled people as a group. Chapter 10, *Attitudes Toward Physical Disability Groups*, presents and discusses four scales, all of which attempt to measure attitudes toward people who are disabled as a result of a physical impairment (e.g., blindness, deafness, epilepsy, and cerebral palsy). Chapter 11, *Attitudes Toward Psychiatric Disability Groups*, presents and discusses three attitude scales, while Chapter 12, *Attitudes Toward People Who Are Mentally Retarded*, presents and discusses four scales. The final chapter of Part III, Chapter 13, *Societal Responsibilities to People With Disabilities*, presents and discusses five attitude scales, all of which attempt to measure the extent to which respondents endorse premises concerning the responsibilities of society to the needs of people who are disabled. In particular, four of these scales attempt to measure attitudes to the special education practice of mainstreaming.

The final section of the book, Part IV, consists of a final chapter—Chapter 14, *Summary and Recommendations*. This chapter presents a summary of the preceding 13 chapters as a framework for the reader to use for his or her study of the measurement of attitudes toward people with disabilities. The book concludes with a series of recommendations for researchers who are proposing to investigate the formation, structure, and correlates of attitudes toward people who are disabled.

We wish to thank these authors for making available copies of their attitude scales for review in Part III: Joan D. Berryman, Jacob Cohen, Emory L. Cowen, Jennifer Gan, Doris C. Gilbert, Sheldon A. Grand, Robert Harth, Barbara Larri-vee, Liora Pedhazur Schmelkin, William M. Reynolds, Jerome Siller, and Harold E. Yaker.

We also thank Linda Filippelli, Rose Misuraca, and Audrey Thresher for their research and secretarial assistance.

And we acknowledge with deep appreciation the support and understanding of our families, friends, and colleagues throughout the time this book has been our preoccupation.

Richard F. Antonak  
Hanoch Livneh

## ABOUT THE AUTHORS

**RICHARD F. ANTONAK** received the BA degree in mathematics from Rutgers College (1969), and the M.Ed. (1970) and Ed.D. (1975) degrees in special education from Temple University. His first professional experience with people with disabilities was as a teacher of mentally retarded adolescents at the Woods Schools in Langhorne, Pennsylvania. From 1970 to 1973 he served as work-study coordinator at Penncrest High School in Media, Pennsylvania. While completing graduate study, he supervised teachers of exceptional children and taught special education courses for the Pennsylvania State University. He joined the faculty of the education department at the University of New Hampshire in 1975 where he designed and established the university's first special education teacher training courses and the Master's degree programs in developmental disabilities and special education. He is currently Professor of Education and the Coordinator of Special Education Programs at UNH.

Dr. Antonak's research specialties are in attitude measurement, psychometrics, multivariate statistics, and the history of mental retardation. He has published several research instruments to measure attitudes toward disabled people, including the Scale of Attitudes Toward Disabled People (SADP). He has authored research articles and statistical analysis programs, as well as monographs and book chapters on topics in attitude measurement and developmental disabilities. He has appeared as an expert witness on behalf of people with developmental disabilities and their advocates in court cases, and has served as a member or consultant to boards, agencies, and committees concerned with the provision of services for people who are disabled.

Dr. Antonak was elected to Phi Beta Kappa and Pi Mu Epsilon (the National Honorary Mathematics Society) while at Rutgers, and was advanced to Fellow of the American Association on Mental Deficiency (AAMD) in 1983. He was elected a member of the American Academy on Mental Retardation and the American Statistical Association. An incorporator of AAMD's Northeast Region X, he served as president in 1980 and is presently completing a second three-year term as secretary-treasurer. He is co-founder and incorporator of the New Hampshire State Chapter of AAMD which he serves as secretary-treasurer.

**HANOCH LIVNEH** received his BA degree in psychology from the Hebrew University, Jerusalem, Israel (1971) and his MA (1973) and Ph.D. (1976) degrees in Rehabilitation Counseling Psychology from the University of Wisconsin-Madison. In 1973, while doing his practicum and internship at the Division of Vocational Rehabilitation and the Dane County Mental Health Center, he counseled both physically and psychiatrically disabled clients. Also, during his doctoral studies, he supervised graduate students enrolled in rehabilitation counseling practicum courses. He joined the faculty of the Rhode Island College Counselor Education Department (later restructured and renamed the Department of Counseling and Educational Psychology) in 1977, as the Assistant Director of the Rehabilitation Counseling Program. In 1979, he became the director of the program and in 1980 led it to national accreditation by the Council On Rehabilitation Education (CORE). He is currently an Associate Professor of Rehabilitation and Counselor Education and the Director of the Rehabilitation Counseling Program at Rhode Island College.

Dr. Livneh's research interests are in attitude formation and measurement, adjustment to and coping with disability, psychiatric rehabilitation, and counseling and personality theories. He has authored theoretical and research articles and book chapters on attitude origination and measurement, adjustment to disability, the structure of anxiety and death anxiety, and rehabilitation models. He serves as a vocational expert for the Office of Hearings and Appeals, Social Security Administration. He served as consultant and peer counseling trainer for the Rhode Island Division of Vocational Rehabilitation, Rhode Island Institute of Mental Health, United Cerebral Palsy, and PARI Independent Living Center.

Dr. Livneh serves as a consultant reviewer for three journals—*Journal of Applied Rehabilitation Counseling*, *Rehabilitation Counseling Bulletin*, and *Journal of Social Behavior and Personality*. He is a Certified Rehabilitation Counselor, National Certified Counselor, and a Certified Vocational Expert.

# CONTENTS

	<i>Page</i>
<i>Foreword by Harold E. Yuker</i> . . . . .	v
<i>Preface</i> . . . . .	ix
<i>About the Authors</i> . . . . .	xiii
 <b>PART I: ATTITUDE MEASUREMENT METHODS</b>	
<b>CHAPTER 1. Introduction</b> . . . . .	5
Definitions of Attitude . . . . .	6
Abstractness. . . . .	6
Extensiveness. . . . .	7
Cognitive Component . . . . .	7
Affective Component . . . . .	7
Behavioral Component. . . . .	8
Examples . . . . .	8
Attitudes and Related Concepts . . . . .	10
Attitudes and Beliefs. . . . .	10
Attitudes and Opinions . . . . .	10
Attitudes and Values. . . . .	11
Attitudes and Behaviors . . . . .	11
Why Study Attitudes? . . . . .	11
Functions of Attitudes . . . . .	11
Attitudes Influence Behavior. . . . .	13
Implications for Disabled People. . . . .	13
Measurement of Attitudes Toward People With Disabilities . . . . .	14
History of the Measurement of Attitudes. . . . .	14
History of the Measurement of Attitudes Toward Disabled People . . . . .	16
Summary and Prelude . . . . .	19
<b>CHAPTER 2. Fundamentals of Attitude Measurement</b> . . . . .	21
Measurement. . . . .	21

Levels of Measurement . . . . .	22
Nominal Measurement . . . . .	22
Ordinal Measurement . . . . .	22
Interval Measurement . . . . .	23
Ratio Measurement . . . . .	23
Representational and Index Measurements . . . . .	24
Scales and Scaling . . . . .	25
Methods to Measure Attitudes . . . . .	25
Indirect and Direct Methods . . . . .	26
Indirect Methods . . . . .	26
Direct Methods . . . . .	27
Which Method to Select? . . . . .	28
Summary and Prelude . . . . .	28
<b>CHAPTER 3. Direct Methods of Attitude Measurement . . . . .</b>	<b>31</b>
Surveys, Interviews, and Rankings . . . . .	31
Opinion Surveys . . . . .	31
Interviews . . . . .	32
Rankings . . . . .	33
Q-Methodology . . . . .	34
Checklists . . . . .	35
Sociometrics . . . . .	35
Adjective Checklists . . . . .	35
Paired-Comparison Scales . . . . .	36
Rating Scales . . . . .	38
Semantic Differential Scales . . . . .	39
Probabilistic Rating Scales . . . . .	40
Summated Rating Scales . . . . .	41
Consensual Location Scales . . . . .	42
Scale Discrimination Method . . . . .	44
Deterministic Rating Scales . . . . .	44
Guttman Scaling . . . . .	45
Ordering Theory . . . . .	47
Summary and Prelude . . . . .	49
<b>CHAPTER 4. Multidimensional Scaling by <i>Liora Pedhazur Schmelkin</i> . . . . .</b>	<b>51</b>
Limitations of Traditional Scaling Approaches . . . . .	52
Dimensionality of the Data . . . . .	53
Multi-Disability Comparisons . . . . .	53
Researcher's A Priori Conceptions . . . . .	54



Nonmetric Multidimensional Scaling . . . . .	55
Purposes of MDS . . . . .	55
MDS of Perceptions . . . . .	55
General MDS Procedures . . . . .	56
Classical MDS Procedures . . . . .	57
A Classical MDS Example . . . . .	58
Individual Differences MDS . . . . .	62
An Individual Differences MDS Example . . . . .	62
Issues and Concerns in the Use of MDS . . . . .	65
Subject Selection . . . . .	65
Data-Related Questions . . . . .	66
Model and Computational Concerns . . . . .	66
Interpretation Concerns . . . . .	66
Group Comparisons . . . . .	66
Confirmatory MDS . . . . .	67
Some Suggested Uses of MDS in Attitudes to Disability Research . . . . .	67
Summary and Prelude . . . . .	67
<b>CHAPTER 5. Indirect Methods of Attitude Measurement . . . . .</b>	<b>69</b>
Validity Threats of Direct Measures . . . . .	69
Respondent Sensitization . . . . .	69
Reactivity . . . . .	70
Response Styles . . . . .	71
Indirect Methods . . . . .	72
Projective Techniques . . . . .	72
Association Techniques . . . . .	72
Construction Techniques . . . . .	72
Completion Techniques . . . . .	72
Choice or Ordering . . . . .	73
Expressive Techniques . . . . .	73
Disguised Procedures . . . . .	74
Behavioral Observations . . . . .	77
Behavioral Observations in Natural Settings . . . . .	78
Behavioral Observations in Simulated Settings . . . . .	80
Physiological Methods . . . . .	82
Summary and Prelude . . . . .	84
<b>PART II. PSYCHOMETRIC GUIDELINES FOR ATTITUDE SCALES</b>	
<b>CHAPTER 6. Reliability . . . . .</b>	<b>89</b>

Methods to Estimate Reliability .....	89
Test-Retest Reliability Estimates .....	90
Alternate-Forms Reliability Estimates .....	90
Test-Retest and Alternate-Forms Reliability Estimates .....	91
Internal Consistency Reliability Estimates .....	91
Split-Half Reliability Estimate .....	92
Kuder-Richardson Reliability Estimate .....	92
Cronbach's Coefficient Alpha Reliability Estimate .....	93
Hoyt's Analysis of Variance Reliability Estimate .....	93
Inter-Judge Reliability Estimates .....	94
Standard Error of Measurement of Scores .....	94
Factors Affecting Reliability .....	95
Group Homogeneity .....	95
Scale Length .....	95
Difficulty of the Items .....	96
Discrimination of the Items .....	96
Content of the Scale .....	96
Time Limits .....	97
Objectivity of the Scale .....	97
Uniformity of Testing Conditions .....	97
Summary and Prelude .....	97
<b>CHAPTER 7. Validity .....</b>	<b>99</b>
Types of Validity .....	100
Content Validity .....	100
Criterion-Related Validity .....	101
Concurrent Validity .....	101
Predictive Validity .....	103
Construct Validity .....	103
Multitrait-Multimethod Validity .....	104
Factor-Analytic Validity .....	105
Experimental Validity .....	106
The Validation Process .....	106
Factors Affecting Validity .....	106
Reliability of the Predictor and Criterion .....	106
Heterogeneity of the Sample .....	107
Characteristics of the Sample .....	107
Length of the Scale .....	107
Criterion Contamination .....	107
Summary and Prelude .....	108

<b>CHAPTER 8. Psychometric Characteristics of Attitude Scales</b> .....	109
Item Preparation .....	110
Pilot Studies .....	111
Item Analyses .....	112
Response Distributions .....	112
Difficulty and Discrimination .....	113
Scale Analyses .....	114
Distribution of Scores .....	114
Dimensionality .....	114
Specificity .....	115
Latent Structure Analysis .....	115
Response Styles .....	116
Acquiescence Response Style .....	116
Social Desirability Response Style .....	116
Extreme Position Response Tendency .....	117
Faking .....	117
Normative Data .....	117
Summary and Prelude .....	119
 <b>PART III. SCALES FOR THE MEASUREMENT OF ATTITUDES</b>	
<b>CHAPTER 9. General Attitudes Toward People With Disabilities</b> .....	123
(A) Acceptance Scale .....	123
(ATDP) Attitudes Toward Disabled Persons Scale .....	134
(DFS) Disability Factor Scales .....	144
(DSDS) Disability Social Distance Scale .....	153
(RGEPS) Rucker-Gable Educational Programming Scale .....	157
(SADP) Scale of Attitudes Toward Disabled Persons .....	159
 <b>CHAPTER 10. Attitudes Toward Physical Disability Groups</b> .....	165
(AB) Attitudes to Blindness Scale .....	165
(AD) Attitudes to Deafness Scale .....	171
(ATPE) A Scale of Knowledge and Attitudes Toward Epilepsy and People With Epilepsy .....	177
(DSRS) Disability Social Relationship Scale .....	182
 <b>CHAPTER 11. Attitudes Toward Psychiatric Disability Groups</b> .....	193
(CMI) Custodial Mental Illness Ideology Scale .....	193
(MHIQ) Mental Health Information Questionnaire .....	198
(OMI) Opinions About Mental Illness Scale .....	205

<b>CHAPTER 12. Attitudes Toward People Who Are Mentally Retarded . . . . .</b>	<b>217</b>
(ATR) Attitudes Toward the Retarded Scale . . . . .	217
(AMRP) Attitudes Toward Mentally Retarded People Scale . . . . .	220
(MASMR) Multidimensional Attitude Scale on Mental Retardation . . . . .	224
(MRQ) Mental Retardation Questionnaire . . . . .	233
<b>CHAPTER 13. Societal Responsibilities Toward People With Disabilities . . . .</b>	<b>239</b>
(ATDS) Attitudes Toward Disablement Scale . . . . .	239
(ATMS) Attitudes Toward Mainstreaming Scale . . . . .	248
(EAS) Educational Attitude Survey . . . . .	252
(MO) Mainstreaming Opinionnaire . . . . .	256
(ORM) Opinions Relative to Mainstreaming . . . . .	263
<b>PART IV. CONCLUDING COMMENTS</b>	
<b>CHAPTER 14. Summary and Recommendations . . . . .</b>	<b>271</b>
Summary . . . . .	271
Recommendations . . . . .	273
Refine Rather Than Create Scales . . . . .	274
Use Indirect Attitude Measures . . . . .	275
Use Multidimensional Scaling Methods . . . . .	275
Report Psychometric Properties of Scales . . . . .	275
Use the Correct Reliability Estimate . . . . .	276
Report Data-Based Validity Estimates . . . . .	276
Investigate Attitude-Behavior Relationships . . . . .	276
Investigate Attitude Correlates . . . . .	277
Select a Multidimensional Scale . . . . .	277
Search for Fundamental Domains of Attitudes . . . . .	277
Investigate the Context of Attitudes . . . . .	278
Beware of Biasing Factors . . . . .	278
Not Everyone Is a College Freshman Taking Introductory Psychology . . . . .	278
Specify the Attitude Referent . . . . .	279
Update Old Scales . . . . .	279
Concluding Comments . . . . .	280
<b>REFERENCES . . . . .</b>	<b>281</b>
<b>APPENDIX A: Names and Addresses of Primary Authors of the</b>	
<b>22 Scales Reviewed in Part III . . . . .</b>	<b>299</b>
<i>Index . . . . .</i>	<i>303</i>

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## Part I

### ATTITUDE MEASUREMENT METHODS

**T**HIS PART consists of five chapters. In the first chapter, we will begin with an introduction to the concept of attitude. The functions served by, and the importance of investigating, attitudes will then be discussed, followed by an explanation of the importance of studying attitudes toward people who are disabled. Finally, the history of the measurement of attitudes in general, and attitudes toward people who are disabled in particular, will be traced. We will emphasize scales measuring attitudes toward a variety of disabling conditions which have been developed during the past quarter century.

In Chapter 2 we will provide an overview of basic concepts in attitude measurement, definitions of indirect and direct methods of measurement, and a discussion of the concept of scaling. A taxonomy for the classification of attitude measurement methods will then be proposed. A total of ten direct attitude measurement methods will be described in detail in Chapter 3. This will be followed by a discussion of nonmetric multidimensional scaling in the invited chapter written by Professor Liora Pedhazur Schmelkin. In the last chapter in Part I, Chapter 5, we will discuss indirect methods of attitude measurement, focusing on four methods: projective techniques, disguised procedures, behavioral observations, and physiological methods. The advantages of indirect methods in comparison to direct methods will be presented at the end of this chapter.





## Chapter 1

### INTRODUCTION

**P**ROFOUND CHANGES in the provision of educational, psychosocial, and vocational services to people who are disabled have resulted from recent legislation (e.g., the Vocational Rehabilitation Act of 1973, P.L. 93-112, and its Amendments of 1974, P.L. 93-516; the Education for All Handicapped Children Act of 1975, P.L. 94-142; the Vocational Education for People With Disabilities Act of 1975, P.L. 94-482; the Comprehensive Rehabilitation Services Amendments of 1978, P.L. 95-602), litigation (e.g., lawsuits concerning institutional conditions, zoning restrictions, employment discrimination, access to services, the provision of special education), and research efforts (e.g., alternative communication systems for sensorially-impaired people, application of microcomputer technology to rehabilitation services, advanced diagnostic, medical, and surgical procedures to prevent, detect and correct disabling conditions). These changes are increasing the integration of children and adults who are disabled into the nation's schools, neighborhoods, and workplaces.

Full acceptance of people who are disabled by individuals who are not disabled will not occur, however, until subtle barriers can be eliminated. Most scholars and researchers agree that the attitudes of professionals, parents, peers, employers, coworkers, neighbors, and disabled people themselves compose one of the factors inherent in subtle barriers (Altman, 1981; Jones and Guskin, 1984). These attitudes are for the most part negative (Roessler and Bolton, 1978; Wright, 1983), and create or support negative expectations and behaviors which limit the successful rehabilitation, integration, and independence of disabled people in the community.

Siller (1984) has observed that "pinpointing attitudinal components will suggest differential change procedures and promote appropriate assessment of the effect of interventions" (p. 200). Similarly, Jones and Guskin (1984) have called for research efforts to create "a distinct framework for thinking about, investigating, and intervening in attitudes toward the handicapped" (p. 11). The framework to be adopted should allow researchers to examine the attitudes of individuals in various influential roles, and those of disabled people themselves. Answers to

questions concerning the multidimensional and intricate interrelations of knowledge, attitudes, and behavior would, in turn, permit policy-makers and practitioners to design intervention strategies to change attitudes toward people who are disabled, to improve the training of personnel, and to remove barriers to services.

Investigations concerning attitudinal barriers to the rights of people with disabilities to participate in the benefits of society require psychometrically sound instruments which are reliable, valid, and multidimensional. Moreover, these instruments must allow for flexibility and differentiation in the definition, conceptualization, and measurement of attitudes. It is the intention of this book to assist researchers and practitioners in the fields of rehabilitation, special education, developmental and social psychology, and counseling to accomplish these important research objectives.

The present chapter begins by providing the reader with various definitions of attitude, its structure and dimensions. Next, the reasons why the study of attitudes per se is important will be presented, together with a discussion of the importance of attitude measurement. Particular emphasis will be placed on the measurement of attitudes toward people with disabilities. Finally, a brief history of the measurement of attitudes in general, and of attitudes toward disabled people in particular, will enable the reader to better understand contemporary measurement techniques. The chapter will conclude with a description of the goals for the remaining chapters of the book.

## DEFINITIONS OF ATTITUDE

There are two main dimensions along which attitude definitions appear to vary: (a) a dimension represented by a continuum of abstractness, ranging from concrete (or operationally-defined) to abstract (or theoretically-conceptualized); and (b) a dimension represented by the extensiveness of the components (i.e., cognitive, affective, behavioral, or conative) included in the definition.

### **Abstractness**

Attitudes are descriptive concepts which are inferred from observations of behavior; they are not themselves directly observable or measurable. Attitudes are often regarded as latent or inferred psychosocial constructs or processes which are postulated as residing within one's self. Furthermore, these constructs or processes lie dormant unless evoked by specific stimuli or referent objects (e.g., individuals, social groups, situations, events, social issues). These referents, by virtue of their perceived psychosocial value, are then capable of eliciting an attitude response from the subject. In this sense, attitudes may be conceived as mediators between particular observed environmental stimuli and specific behavioral responses (Allport, 1935).

The abstractness dimension, then, can be attributed to what Shaw and Wright (1967) called “the epistemological issue of specificity versus generality in the determination of behavior” (p. 2). The less the distance which the definer perceives from the mediating attitude to the observable behavioral response, the more concrete or specific the concept of attitude is defined. In other words, as attitudes are judged to be more proximal causes of behavior, the more affect they will be thought to exert on the ensuing behavior and the more specific the definition will become.

Examples of general (i.e., abstract or non-specific) definitions of attitude are provided by Katz (1960): “Attitude is the predisposition of the individual to evaluate some symbol or object or aspect of his world in a favorable or unfavorable manner” (p. 168), and by Allport (1935): “[Attitude is] the degree of affect for or against an object or a value” (p. 10). Examples of specific (i.e., concrete) definitions of attitude can be found in English and English (1958): “[Attitude is] an enduring learned predisposition to behave in a consistent way toward a given class of objects” (p. 50), and in Hilgard and Atkinson (1967): “[Attitude is] an orientation towards or away from some object, concept, or situation, and a readiness to respond in a predetermined manner to these, or related objects, concepts, or situations” (p. 583).

### **Extensiveness**

The second dimension, which provides a basis for conceptualizing the content of attitude, is that of categorical structure. Three (at times four) categories or components are typically postulated: a cognitive component, an affective component, and a behavioral (or conative) component.

**Cognitive Component.** The cognitive component of attitude refers to the individual’s ideas, thoughts, perceptions, beliefs, or opinions about the attitude referent. In other words, it reflects how the attitude referent is mentally conceptualized. Triandis (1971) posits that this component can be observed in the individual’s use of critical attributes to categorize experience, such as in stereotypical perceptions (i.e., the belief that members of a particular racial, religious, or disability group possess certain common attributes). Cognitive responses are typically expressed through the use of verbal statements of opinions or beliefs and are measured accordingly. Statements suggesting desirable or undesirable qualities, characteristics, or attributes of the attitude referent are presented and the respondent is asked to indicate the degree of his or her agreement or disagreement with each statement. The cognitive component, viewed as an index of meaning (McGuire, 1960; Triandis, 1971), is ordinarily measured by such instruments as adjective checklists and by the activity and potency factors of the semantic differential. (See Chapter 3 for a discussion of these attitude measurement techniques.)

**Affective Component.** The affective component of attitude reflects the feeling