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DEVELOPING A JORDANIAN ADAPTATION OF THE
AMERICAN ASSOCIATION ON MENTAL DEFICIENCY
ADAPTIVE BEHAVIOR SCALE
PUBLIC SCHOOL VERSION
PART I

By

Farouq Farie Elrousan

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Elementary and Special Education

1981

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1981

ABSTRACT

DEVELOPING A JORDANIAN ADAPTATION OF THE AMERICAN ASSOCIATION ON MENTAL DEFICIENCY ADAPTIVE BEHAVIOR SCALE PUBLIC SCHOOL VERSION PART I

By

Farouq Farie Elrousan

The lack of accurate diagnostic instruments has been a major problem in diagnosing and treating mentally retarded children in Jordan. Despite the increasing interest in assessing both intellectual potential (IQ) and adaptive behavior, only the Stanford-Binet and the Wechsler intelligence scales had been preliminarily standardized for use with the Jordanian population at the time of this study. The present study represents the first attempt to provide an instrument for assessing the adaptive behavior of Jordanian mentally retarded children.

The main purpose of the study was to develop a Jordanian adaptation of the American Association on Mental Deficiency Adaptive Behavior Scale (AAMD-ABS), Public School Version, Part I. The AAMD-ABS was chosen because it is more comprehensive than other adaptive behavior scales and because adaptation or standardization efforts in Belgium, Egypt, Japan, India, Puerto Rico, and the United States have proven that it is an effective means of diagnosing and placing mentally retarded individuals. Part I was selected because it has a

higher reliability than Part II.

The specific objectives of the study were to (1) translate the AAMD-ABS from English to Arabic; (2) administer the Arabic form to a sample of Jordanian children; (3) evaluate the Arabic form's ability to discriminate among different age levels and between nonhandicapped and mentally retarded children; and, (4) compare the Jordanian and U.S. domain scores in order to evaluate the pattern of the Jordanian scores.

Research Design and Methodology. In order to accomplish the above objectives, (1) an Arabic version of the AAMD-ABS was developed using the back-translation procedure; (2) the Jordanian ABS was administered to a Jordanian sample of 150 nonhandicapped (NH), educable/mildly retarded (EMR), and severely retarded (SMR) children representing the age levels 7^3-8^2 , 9^3-10^2 , and 11^3-12^2 ; and (3) analysis of variance, the Multiple Range Test of Least Significant Difference, the "t" test, and an analysis of teachers' responses to each item were used to analyze the data.

Findings. The study found that (1) the Jordanian ABS has a concurrent validity in terms of its ability to discriminate among different functioning and age levels; (2) the reliability of the Jordanian scores ranges from .9110 to .3756; (3) the means for some Jordanian domain scores are significantly different when compared with the means for some U.S. scores—(a) EMR. The U.S. means for seven of the nine

domain scores [Independent Functioning (IFU), Economic Activity (EA), Self-Direction (SD), Responsibility (R), and Socialization (S)] are significantly higher than the Jordanian means. The means for the remaining domains [Physical Development (PD) and Vocational Activity (VA)] are lower but not significantly different. NH, 7³-8². The U.S. means for five of the nine domain scores (IFU, LD, NT, SD, and S) are significantly higher than the Jordanian means. The means for the remaining scores (PD, EA, VA, and R) are not significantly different. NH, 9³-10² and 11³-12². The U.S. means for three of the nine domain scores (IFU, SD, and S) are significantly higher than the Jordanian means. The means for the remaining scores (PD, EA, LD, NT, VA, and R) are not significantly different; and (4) teachers of mentally retarded children in Jordan were generally more certain of their responses than were teachers of nonhandicapped children.

Recommendations. There should be continued development of a Jordanian version of the AAMD-ABS, Public School Version, Part I. Future studies should (1) include only items that are appropriate to the Jordanian culture; (2) use more than one procedure to determine the scale's reliability; (3) study the scale's predictive validity; (4) consider including parents as sources of information about their children; and (5) include both male and female students in the nonhandicapped group.

TO
MY PARENTS AND MY FAMILY

ACKNOWLEDGMENTS

It is my pleasure to express my appreciation to the many people who were very supportive in helping me to conduct this study. Grateful acknowledgment is extended to

Dr. Ronald M. Wolthuis, Associate Professor of Special Education, my advisor and committee chairman, for his patience, availability, encouragement, and cooperation through all stages of this study;

Dr. Edwin J. Keller, Professor of Special Education, my committee member, for his kindness, support, encouragement, and cooperation, especially in developing the research design and methodology;

Dr. Donald A. Burke, Professor of Special Education, my committee member, for his encouragement and support in developing the idea for this research and for his positive comments;

Dr. George V. Gore, Professor of Special Education, my committee member, for his kindness, encouragement, understanding, and supportive ideas;

Dr. John P. McKinney, Professor of Psychology, my committee member, for his supportive comments and cooperation, especially regarding the statistical procedures;

Dr. Abdalah H. Z. Kaylani, my committee member, University of Jordan, for his encouragement and support, for reviewing and facilitating the administration of the Jordanian ABS, for preparing a back-translation of the Arabic form, and for commenting on the statistical procedures;

Dr. Albert J. Berkowitz, Executive Director, American Association on Mental Deficiency, Washington, D. C.; Dr. Kazuo Nihira, Professor, Department of Psychiatry, School of Medicine, University of California, Los Angeles, and

Dr. Henry Leland, Director of Psychology, Nisonger Center, Ohio State University, the co-authors of the AAMD Adaptive Behavior Scale; Dr. Mandana Shoaee, Coordinator, Children's Adaptive Behavior Scale Project, and the staff of the Adaptive Behavior Scale Project, Nisonger Center, Ohio State University, for their encouragement and assistance and for the materials that I received from them;

Dr. Donald E. Galvin, Professor of Rehabilitation Counseling and Community Health Science, Center for International Rehabilitation (UCIR), Michigan State University, for his encouragement and partial financial support of this study;

Dr. William D. Frey, Director of Research, UCIR; Dr. James J. Mullin, Coordinator of Information Systems, UCIR; Mr. Mohammed Mahrous Mohammed (from Egypt), Doctoral Candidate, MSU; Mr. Robert W. Matson, Computer Specialist, MSU; and Mr. Robert L. Jarvis, Doctoral Candidate, MSU, for their encouragement and assistance in computer programming and statistical analysis;

Dr. Denise G. Tate, Coordinator of Research and Evaluation, UCIR; Dr. Marianne Maynard, Director of Education and Training, UCIR; Mr. Ziad S. Kabatilo (from Jordan), Mr. Yaser O. Salem (from Jordan), and Mr. James Fritz (from the United States), Doctoral Candidates, MSU, for their cooperation in rating the translation and back-translation forms of the Jordanian ABS;

Ms. Aida T. Jildeh, Post-Graduate Candidate, MSU, for her patience and cooperation in preparing a back-translation of the Jordanian ABS;

Mr. Abdalaha Menezel, Mr. Jamil Smadi, and Mr. Jalal Jarar, Graduate Assistants, Department of Psychology, College of Education, The University of Jordan, for their cooperation and assistance in administering the Jordanian form of the ABS;

The directors and teachers of the special education programs offered by the Al-Manar Center of Zarga, Jordan; the Mental Health Association of Jordan; the Young Women's Muslim Association of Jordan; and the Swedish Organization for Individual Relief.

The directors and teachers of the Al-Gebeha and Zead Ben Al-Katab schools, Amman Governorate, Jordan;

My colleagues and friends, the Jordanian graduate students at Michigan State University, for their cooperation in reviewing the first draft of the Arabic translation of the ABS;

Ms. Nancy Lee Radtke and Mr. Paul H. Schneider for their patience and cooperation in editing this manuscript;

Ms. Graciela Abkin, Ms. Eileen M. Butka, Ms. Nancy Lee Radtke, and Ms. Virginia S. Vande Word for their cooperation in typing the many drafts of this dissertation; and, finally,

My wife Hala, my son Yazan, my parents, sisters, and brothers for their love, patience, encouragement, and ongoing support.

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Chapter I

INTRODUCTION

Accurately diagnosing mental retardation is a complex process. Medical, social, and intellectual characteristics need to be considered if individuals who are mentally retarded are to be properly diagnosed and adequate services are to be provided for them.

In the early 1800s, when medical personnel were primarily responsible for diagnosing and treating mental retardation, the emphasis was on the physical causes of retardation. This emphasis began to change in the early 1900s when a number of psychologists started to explore the psychometric approach to diagnosis. Binet, Terman, Wechsler, Piaget, and others experimented with the use of the intelligence quotient (IQ) as a means of diagnosing and defining mental intellectual development. Thus, during this period, most mentally retarded individuals were diagnosed and placed primarily on the basis of their IQ scores.

By the 1950s, professionals in the areas of mental retardation, psychology, and special education had begun to recognize the limitations associated with using only the

psychometric approach to diagnosis. This approach was considered insufficient because diagnosis was based on a person's ability to perform a limited number of cognitive and performance tasks and did not consider that person's adaptive behavior or social adjustment in general. For example, low scores on traditional psychometric tests do not necessarily mean that an individual is mentally retarded; he or she may, in fact, have adequate social adaptation skills. In a 1970 report, The Six-Hour Retarded Child, the President's Committee on Mental Retardation showed that a child who is labelled mentally retarded because of low IQ scores may act retarded during the six-hour school day but function normally outside of school.

In 1959, the American Association on Mental Deficiency (AAMD) recognized the importance of adaptive behavior as a dimension in diagnosing mental retardation when it incorporated the concept as part of its definition of mental retardation. The AAMD also commissioned the development of two adaptive behavior scales (ABS)—the Adaptive Behavior Scale for Adults and Children and the Adaptive Behavior Scale, Public School Version (Nihira, Foster, Shellhaas, and Leland, 1975).

At the time of this study, the AAMD-ABS had been adapted or standardized for use in the United States, Japan, India, Belgium, Puerto Rico, and Egypt, but it had not been adapted or standardized for use in Jordan. This study was

designed to provide Jordanian professionals with an adaptation of the AAMD-ABS in the hope that this would help mentally retarded students in Jordan to be more accurately diagnosed and to receive more appropriate services.

Rationale for Considering Adaptive Behavior

The concept of adaptive behavior is not a new concept in psychology. Piaget (1950) used the term "adaptation" to refer to a biological function which consisted of the balance between accommodation and assimilation. The concept of adaptive behavior has been included in the AAMD definition on mental retardation since 1959. Leland (1973) noted that

the interest in adaptive behavior led to the modification of the definition of mental retardation to include the concept of sub-average intellectual functioning which originates during the developmental period and is associated with impairment in adaptive behavior (p. 91).

In the 1974 revision of the AAMD Adaptive Behavior Scale Manual, Lambert, Windmiller, Cole, and Figueroa listed two major aspects of adaptive behavior and stressed their importance in determining whether or not an individual was retarded. These were

(1) the degree to which the individual is able to function and maintain himself independently, [and] (2) the degree to which he meets satisfactorily the culturally imposed demands of personal and social responsibility (p. ix).

Leland, Shellhaas, Nihira, and Foster (1967) indicated that the concept of adaptive behavior includes three

behavioral aspects: maturation, learning, and social adjustment. In 1973, Leland identified three basic forms of individual adaptation to the environment: independent functioning, personal responsibility, and social responsibility.

Coulter and Morrow (1978) considered adaptive behavior to be a basic criterion in diagnosing and placing mentally retarded children. They pointed to the support that this view has received at the government level:

Recent federal legislation (Public Law 93-380 and Public Law 94-142) has included the measurement of adaptive behavior as part of the assessment of mental retardation (p. 133).

Among the primary reasons for including adaptive behavior as a dimension in diagnosing mental retardation are the limitations associated with using only the psychometric approach to diagnosis. The psychometric approach depends on a person's ability to perform a limited number of cognitive and performance tasks, while the adaptive behavior approach depends on a person's ability to adapt to his environment.

Lambert, Windmiller, Cole, and Figueroa (1975) expressed the following concerns about IQ scales as measures of mental retardation:

Traditional tests of IQ do not indicate how well a child may function socially, nor how well he copes with the various demands made upon him by the people and circumstances of his environment (p. xi).

In a 1977 article, "Theoretical Considerations of Adaptive Behavior," Leland referred to the relationship between adaptive functioning and intelligence and discussed why it is necessary to focus on the adaptive behavior of the mentally retarded child:

While there is an overlap between measured intelligence and adaptive behavior within institutional settings, at least 50% of the patients' measured intelligence and adaptive behavior are different, this represents a major consideration in terms of program planning and community transitions. Even in the institutional setting where the concept would be most challenged, adaptive behavior emerges as a separate dimension (p. 26).

Leland (1977) also noted the similarity between noninstitutionalized and institutionalized mentally retarded children in terms of their IQ, but commented that the distributions of the adaptive behaviors of the two groups are different:

As we move into the community, a new phenomenon appears. The mentally retarded still resemble their counterparts in institutions in measured intelligence, but because they have not been institutionalized, they present a different distribution of adaptive behaviors and the correlations which appear in institutional figures tend to disappear in favor of a large group of individuals who are still mentally retarded in terms of their IQ scores (i.e., they present significant subaverage levels of general intellectual functioning), but who, nonetheless, often present adaptive behavior levels very similar to those found in the normal population (p. 26).

In their 1978 book, Exceptional Children, Hallahan and Kauffman noted that adaptive behavior is an important tool because IQ tests are less valid and less reliable when used with younger children. They also commented

even though intellectual capability and the ability to adapt are related to one another to a moderate degree (it is expected, for example, that the more intelligent child will usually be better able to adapt to his environment), there is enough difference between the two concepts to make it necessary to measure each area separately, using different techniques (p. 80).

In short,

superior IQ does not guarantee a successful life; likewise, a subnormal IQ does not doom a person to an unhappy and unfulfilled existence (p. 82).

Therefore, two criteria are essential for accurately diagnosing and placing mentally retarded individuals: the intelligence quotient and adaptive behavior.

Rationale and Justification for the Study

In Jordan, the concept of special education is relatively new. Although there has been a recent trend towards taking care of handicapped children, in 1975 the Christian Reformed World Relief Committee (CRWRC) estimated that about 35,000 mentally retarded individuals in Jordan received insufficient diagnostic and educational services (Kok, 1976). The lack of accurate diagnostic services and appropriate programs is a major problem for mentally retarded children in Jordan. In part, this is because so few scales or instruments have been adapted or standardized for use in Jordan.

Only two diagnostic instruments, both of which are intelligence scales, have been translated and preliminarily standardized for use with the Jordanian population. In

1977 Haddad, Zohbe, and Alali completed a preliminary standardization of the Stanford-Binet Intelligence Scale, and in 1979-80, Smadi, Break, and Qaryouti completed a preliminary standardization of the Wechsler Adult Intelligence Scale (WAIS) and the Wechsler Intelligence Scale for Children (WISC). These adaptations were developed as theses in collaboration with the Center for Tests and Measurement, Psychology Department, Faculty of Education, at the University of Jordan.

The preliminary standardization of these scales means that instruments for measuring the intelligence of mentally retarded children in Jordan are now available. Unfortunately, even though we have seen that both intelligence and adaptive behavior must be considered in diagnosing and placing mentally retarded children, no instruments for measuring the adaptive behavior of the mentally retarded population in Jordan were available when the proposal for this study was prepared in 1979. Thus, the purpose of this study was to adapt the AAMD-ABS for use in Jordan in order to provide Jordanian professionals with a tool for assessing adaptive behavior.

At least two procedures could be employed to develop an adaptive behavior scale for use in Jordan. One approach would be to develop a new adaptive behavior scale. The other would be to modify an existing scale so that it could

be used with the Jordanian population. This study adapted the AAMD Adaptive Behavior Scale, Public School Version, Part I, for use in Jordanian schools. The study did not attempt to adapt Part II because questions have been raised about the reliability of Part II and because the scale's authors plan to revise that section in the future.

Objectives of the Study

The objectives of the study were

- To translate the AAMD-ABS, Public School Version, Part I, from English to Arabic.
- To administer the Arabic form to a sample of Jordanian children. The sample included educable/mildly retarded (EMR), severely retarded (SMR), and nonhandicapped (NH) children representing the age levels 7^3-8^2 , 9^3-10^2 , and 11^3-12^2 .*
- To evaluate the Jordanian form's ability to discriminate among age levels and between nonhandicapped and mentally retarded children.
- To compare the Jordanian scores with U.S. scores in order to evaluate the pattern of the Jordanian domain scores.

By accomplishing these tasks, the researcher sought to make available a Jordanian adaptation of the AAMD-ABS that could later be standardized for use with mentally retarded children in Jordan.

* 7^3 = 7 years, 3 months; 8^2 = 8 years, 2 months; etc.

Definition of Terms

Adaptive Behavior

The AAMD defines adaptive behavior as the effectiveness with which an individual copes with the natural and social demands of his environment (Grossman, 1977, p. 20).

American Association on Mental Deficiency (AAMD)

The AAMD was established in 1876 as the Association of Medical Officers of American Institutions for Idiotic and Feeble-minded Persons. In 1906, the association changed its name to the American Association for the Study of the Feeble-minded. The present name was adopted in 1933. Today, the AAMD is the only interdisciplinary professional and scientific organization on mental deficiency. More than 12,500 members are engaged in its many divisions, subdivisions, and program interest groups. The interest groups focus on administration, education, legal process, medicine, nursing, nutrition and diabetes, physical therapy, private residential facilities, work, speech pathology and audiology, and vocational rehabilitation (Berkowitz, 1979).

American Association on Mental Deficiency, Adaptive Behavior Scale (AAMD-ABS)

The AAMD-ABS is a behavior rating scale for mentally retarded and emotionally maladjusted persons. The scale

enables professionals to more clearly and comprehensively describe an individual's ability to function in daily activities and provides a critical tool for those engaged in planning education, training, and rehabilitation programs (AAMD, 1979).

Two versions of the AAMD-ABS have been developed—the Adaptive Behavior Scale for Adults and Children and the Adaptive Behavior Scale, Public School Version. Each form has two parts: Part I, which was developed after a comprehensive review of existing behavior rating scales in the United States and Great Britain, is

organized along developmental lines and is designed to evaluate an individual's skills and habits in ten behavior domains considered important to the development of personal independence in daily living (Lambert, Windmiller, Cole, & Figueroa, 1975, p. 1) (see Table 1).

Part II is "designed to provide measures of maladaptive behavior related to personality and behavior disorders" (Nihira, Foster, Shellhaas, & Leland, 1975, p. 7) (see Table 2). Included in Part II is a section on the use of medications. Though this is not a behavior domain, it was included to provide information about a person's adaptation to the world (p. 7).

Mental Retardation

The AAMD Manual on Terminology and Classification in Mental Retardation defines a mentally retarded person as "one who has significantly subaverage general intellectual

Table 1. Domains and Subdomains in Part I of the AAMD
Adaptive Behavior Scale

I.	<u>INDEPENDENT FUNCTIONING</u>	IV.	<u>LANGUAGE SKILLS (cont.)</u>
	A. Eating		C. Social Language Development
	B. Toilet Use		
	C. Cleanliness		
	D. Appearance	V.	<u>NUMBERS AND TIME</u>
	E. Care of Clothing		
	F. Dressing and Undressing	VI.	<u>DOMESTIC ACTIVITY</u>
	G. Travel		A. Cleaning
	H. General Independent Functioning		B. Kitchen Duties
			C. Other Domestic Activities
II.	<u>PHYSICAL DEVELOPMENT</u>	VII.	<u>VOCATIONAL ACTIVITY</u>
	A. Sensory Development		
	B. Motor Development	VIII.	<u>SELF-DIRECTION</u>
			A. Initiative
III.	<u>ECONOMIC ACTIVITY</u>		B. Perseverance
	A. Money Handling and Budgeting		C. Leisure Time
	B. Shopping Skills	IX.	<u>RESPONSIBILITY</u>
IV.	<u>LANGUAGE SKILLS</u>	X.	<u>SOCIALIZATION</u>
	A. Expression		
	B. Comprehension		

Table 2. Domains in Part II of the AAMD Adaptive Behavior Scale

I.	<u>VIOLENT AND DESTRUCTIVE BEHAVIOR</u>	VIII.	<u>UNACCEPTABLE VOCAL HABITS</u>
II.	<u>ANTISOCIAL BEHAVIOR</u>	IX.	<u>UNACCEPTABLE OR ECCENTRIC HABITS</u>
III.	<u>REBELLIOUS BEHAVIOR</u>	X.	<u>SELF-ABUSIVE BEHAVIOR</u>
IV.	<u>UNTRUSTWORTHY BEHAVIOR</u>	XI.	<u>HYPERACTIVE TENDENCIES</u>
V.	<u>WITHDRAWAL</u>	XII.	<u>SEXUALLY ABERRANT BEHAVIOR</u>
VI.	<u>STEREOTYPED BEHAVIOR AND ODD MANNERISMS</u>	XIII.	<u>PSYCHOLOGICAL DISTURBANCES</u>
VII.	<u>INAPPROPRIATE INTER- PERSONAL MANNERS</u>		

behavior which are manifested during the developmental period" (Grossman, 1977, p. 5).

The terms used to describe the mentally retarded have changed during the years. Initially, terms such as "moron" and "idiot" were used to define the degree or level of mental retardation. However, in the 1950s and 1960s terms such as "educable," "trainable," and "severely" mentally retarded began to be used. The AAMD has adopted the terms "mildly," "moderately," "severely," and "profoundly" mentally retarded to describe levels of mental retardation and to "provide a more acceptable terminology with respect to intellectual functioning and adaptive behavior" (Lambert, Windmiller, Cole, & Figueroa, 1975).

Chapter II

REVIEW OF THE LITERATURE

The review of the literature is divided into two major sections. The section on adaptive behavior discusses the importance of adaptive behavior and related research, the rationale for selecting the AAMD-ABS for the study, and the criticisms that have been directed against adaptive behavior and adaptive behavior scales. The section on translating materials for use in other cultures discusses problems in developing equivalent translations, current translation techniques, back-translation, and criteria for using the back-translation procedure.

Adaptive Behavior

As noted in Chapter 1, adaptive behavior has come to be recognized as an important dimension in assessing mental retardation. This is evidenced by

- (1) The AAMD's decision to include the concept of adaptive behavior as part of its definition of mental retardation (see "Definition of Terms," p. 9 and "Rationale for Considering Adaptive Behavior," p. 3).

(2) The number of adaptive behavior scales that have been developed in the past 10 years. One of the earliest scales was Doll's 1953 Vineland Social Maturity Scale. Since that time, several other scales have been developed including the Progress Assessment Chart of Social Development (1963, 1965) by Gunzberg; the Cain-Levine Social Maturity Competency Scale (1963) by Cain, Levine, and Elzey; the Balthazar Scales of Adaptive Behavior (1968) by Balthazar, Roseen, and English; the Adaptive Behavior Checklist (1976) by Leon; the Adaptive Behavior Checklist (1976) by Levine; and the AAMD Adaptive Behavior Scales (1969, 1975) by Nihira, Foster, Shellhaas, and Leland.

(3) The many efforts to adapt or standardize the AAMD-ABS for use in other countries. Since 1972, the AAMD-ABS has been adapted or standardized for use in Belgium (Magerotte, 1977), Japan (Tomiyasu, 1977), India (Upadhyaya, 1977), Puerto Rico (Reyes, 1978) and the United States (Lambert, Windmiller, Cole, and Figueroa, 1975). There are also plans to develop Greek, Hebrew, and French versions (Nihira, 1975, p. 1).

(4) The numerous research efforts on the concept of adaptive behavior and the use of the adaptive behavior scale as a new dimension in diagnosing and placing mentally retarded individuals.

Research on Adaptive Behavior and Adaptive Behavior Scales

A number of research studies have been conducted on the concept of adaptive behavior and on instruments for assessing the adaptive behavior of individuals.

Nihira (1969) used the Adaptive Behavior Check List, Parts A and B, to assess 313 institutionalized mentally retarded individuals between the ages of 8 and 19 (approximately half were males and half were females). Each individual was rated by a regular day shift psychiatric aide who was assigned to the ward or cottage where the individual lived. By using factor analysis, Nihira showed that three factors or dimensions of adaptive behavior can be used to describe individual differences: personal independence, social maladaptation, and personal maladaptation. He concluded,

the measurement of adaptive behavior as a tool for predicting the retardate's potential reintegration to a given environment must take into consideration the sociological implications of these behavior reactions (p. 140).

In another study, Nihira (1970) used the Adaptive Behavior Check List to rate 951 mentally retarded individuals between the ages of 18 and 68. These individuals, who lived in two Midwestern state institutions for the mentally retarded, were rated by regular day-shift psychiatric aides assigned to their ward or cottage. The BC TRY Computer

System of Cluster and Factor Analysis was used to obtain clusters of individuals who had similar score profiles with respect to two salient dimensions of the Adaptive Behavior Check List. Nihira found that the

BC TRY Computer System allocated 931 adult retardates into 7 natural cluster groups, each group has a unique pattern of score profiles, and the members of the same group are homogeneous with respect to their behavior patterns on two salient dimensions of adaptive behavior....personal independence and social maladaptation (p. 716).

In his 1971 article, "Environmental Expectations and Adaptive Behavior," Nihira reviewed the shortcomings of using intellectual scales as a measure of mental retardation and noted that other criteria, such as cultural factors, are also important. He also reported on a study that attempted to identify critical behavior domains in terms of the environmental demands that are imposed on mentally retarded individuals. This study examined the effectiveness of the AAMD-ABS as a predictor in measuring behavior domains related to an individual's ability to adapt to critical demands in the environment.

Nihira collected information on 2,500 incidents from 58 psychiatric aides in two state institutions in Kansas, 60 special education teachers in Missouri and Kansas, and 158 attendants at 23 day care centers in Michigan. He found that behavioral expectations could be divided into

two main categories: those associated with a lack of skills and abilities, and those associated with emotional or behavioral disturbances. Regarding the effect of environmental demands on mentally retarded individuals, Nihira found that "the variability of environmental demands is associated with the varying degree of retardation and the concomitant variation of environmental situations to which the retardates must learn to adapt" (p. 619).

In "A Comparison of the Adaptive Behavior of Retarded Individuals Successfully and Nonsuccessfully Placed in Group Living Homes," Taylor (1974) maintained that both IQ and adaptive behavior are necessary measures in diagnosing and placing mentally retarded individuals. In this study, the AAMD-ABS and an individual IQ test were used to compare persons who had successfully adjusted to group living with those who had not adjusted. Taylor found that 88.8 percent of the individuals could be correctly placed in the appropriate group.

In a study on the relationship between different levels of community residential living and adaptive behavior among trainable mentally retarded adults, Bennett (1975) found that the AAMD-ABS could effectively distinguish between three levels of independent community living: economic responsibility and community interaction, personal responsibility, and social interaction, and personal independence.

In "Normalized Behavior and Community Placement," Nihira and Nihira (1975) noted that mentally retarded adults do not succeed or fail in a vacuum: "Community-placed retarded individuals attempt to cope with the demands of their immediate environment—to adapt to their community—under the monitoring of their specific caretakers" (p. 9). Their study, which investigated normative behavior gains in community-placed retarded individuals and was based on an incidental population of respondents, "described some of the gains of the positive behavior possible in a more normalized environment" (p. 13).

Malone and Christian (1974) have suggested that correctly placing mentally retarded children and adolescents in special education classes is not an easy task if only the results of IQ scores are used. They compared the AAMD-ABS scores of 126 students at the Mental Retardation Unit at Central State Hospital, Milledgeville, Georgia, with IQ scores from the students' records in order to determine the reliability and utility of AAMD-ABS scores as a means of placing individuals in the four-level special education program at the hospital. In addition, Wide Range Achievement Test scores for 64 subjects were obtained from the school. Malone and Christian concluded that

[a] significant relationship was found between ABS total scores and IQ, and no significant correlation was found between ABS total scores and Wide Range Achievement Test subtest scores.

This suggests that the ABS scores can be useful as a screening measurement for the special education placement of mentally retarded students (p. 369).

In "Adaptive Behavioral Assessment as the Second Tool in the Criteria for Mental Retardation," Robert, Leslie, Levine, Martin, and Leoffler (1975) pointed to the importance of using adaptive behavior as a second but necessary part of the process of diagnosing mentally retarded individuals. They noted that for many years mentally retarded individuals have been diagnosed on the basis of measured intelligence only. This, however, is not sufficient for other criteria must also be considered. They maintain that assessing adaptive behavior is as important as assessing IQ in diagnosing mentally retarded individuals.

Isett and Spreat (1979) investigated the test-retest and interrater reliability of the AAMD-ABS by using it to assess 300 residents of Woodhaven Center in Pennsylvania. Woodhaven has as its purpose preparing the mentally retarded to live in community settings within two years after they have been admitted to the center. Isett and Spreat found that, while Part I appeared to have sufficient reliability, the findings relative to Part II were more problematic. Test-retest subdomain reliabilities ranged from .62 to .98 (mean: .83) for Part I and from .60 to .97 (mean: .83) for Part II. However, though the interrater reliabilities ranged from .41 to .90 (mean: .83) for Part I, the range for

Part II was .32 to .84 (mean: .56). Thus, while both parts of the AAMD-ABS revealed adequate test-retest reliability, Part II did not have adequate interrater reliability. Isett and Sprent concluded

[though] these findings represent a serious threat in terms of using the ABS to assess maladaptive behavior, the scale authors are to be commended for the attempt to develop an appropriate means of indexing important kinds of maladaptive behavior (p. 95).

Reyes (1978) adapted the AAMD-ABS for use with the Spanish-speaking population of Puerto Rico. She found that the Spanish version had an equivalent discriminative value when compared with the original version of the AAMD-ABS.

Rationale for Selecting the AAMD-ABS

The researcher chose to adapt the AAMD-ABS for the following reasons:

(1) The AAMD-ABS is more comprehensive and exhaustive than other adaptive behavior scales. Gardner and Giampa (1971) compared the AAMD-ABS with three other adaptive behavior scales (the Vineland Social Maturity Scale, the Cain-Levine Social Maturity Competency Scale, and the Comprehensive Behavior Checklist) "for the purposes of differential diagnosis, placement, therapeutic programming and the measurement of change" (p. 352). These authors concluded that

(1) Items on the Vineland scale are less comprehensive than are those on the AAMD-ABS.

(2) The Cain-Levine scale is not a suitable instrument for obtaining information about low-level retarded subjects:

due to the inability of the scale to differentiate within this population, the identification of individual differences is impossible and the scale provides little information as to possible therapeutic programs for consideration (p. 355).

The AAMD-ABS is more useful in diagnosing and placing mentally retarded individuals than is the Cain-Levine scale.

(3) The Vineland scale yields a total score that is converted into social age (SA) or social quotient (SQ). This score is interpreted in the same manner as an IQ score. AAMD-ABS scores, on the other hand, can be used to identify the sub-behavioral domains of adaptive behavior.

(2) The AAMD-ABS can be used in program planning as well as for diagnosing and placing individuals. Leland, Shoaee, and Vayda (1975) suggested that the AAMD-ABS can be used for individual and group purposes regarding

diagnosis and program planning, placement recommendations, treatment priorities, follow-up, recommendations for program planning, evaluation of existing programs and environmental planning (p. 6).

Leland (1977) identified three general uses for the AAMD-ABS:

(1) as a direct report of behavior skills and coping skills that can be used for planning, training, and behavior

modification; (2) as a functional instrument for program evaluation; and, (3) as an aid to diagnosis and classification.

(3) The AAMD-ABS discriminates between behavior levels more effectively than IQ assessments of behavior levels.

Foster and Nihira (1969) indicated that the AAMD-ABS demonstrated significantly more clinical variance in discriminating between behavior levels than did IQ scales.

(4) The AAMD-ABS can be used to develop rehabilitation programs. Nihira and Shellhaas (1970) observed that the AAMD-ABS provides an objective individual and behavioral description of mentally retarded individuals that must be interpreted in light of the demands and requirements imposed upon these individuals in their anticipated environment.

(5) The AAMD-ABS has proven to be an effective means of diagnosing and placing mentally retarded individuals.

Adaptation and/or standardization efforts have been undertaken in the United States (California), Belgium, Egypt, India, Japan, and Puerto Rico (see p. 15).

The researcher adapted only Part I for this study. Part II is being revised by the authors of the AAMD-ABS. In 1979 Nihira wrote, "we are planning to revise Part II of the regular version. The revised edition will not be ready for publication for at least a year." Isett and

Spreat (1979) found that Part II has a low interrater reliability (.32 to .84, mean: .56) in comparison with Part I, which has a high interrater reliability (.41 to .90, mean: .83). While they commended the AAMD-ABS authors for their efforts to develop an appropriate means of indexing maladaptive behavior, Isett and Spreat concluded that their findings represented "a serious threat in terms of using the ABS to assess maladaptive behavior" (p. 95).

Criticisms of Adaptive Behavior and the Adaptive Behavior Scale

In his 1972 article, "The Continuing Problem of Defining Mental Deficiency," Clausen criticized the AAMD's decision to include adaptive behavior as part of the definition of mental retardation:

My objection to the revised AAMD definition does not constitute an endorsement of Doll's Criteria of Essential Incurability. My comment was meant only as an illustration of the changes in concept which have taken place over a period of 25 years....the modified definition of mental retardation has confused more than it has clarified the issue (p. 98).

Clausen disagreed with Leland's approach to defining mental retardation. He questioned including social service issues in the definition of mental retardation:

Leland's original task was to develop a measuring scale for adaptive behavior, so that the AAMD's 1961 definition could be implemented. Subsequently, he emphasized that mental retardation is a matter of an individual's relationship to his community,

although the AB Scale made no attempt to assess the sociological characteristics of the community (p. 100).

Clausen also disagreed with Leland regarding changing the upper limit of "borderline intelligence" from 1 to 2 standard deviations below the mean. Changing it to 2 standard deviations means that the ceiling score would be 67 on the Stanford-Binet and 69 on the Wechsler scales. A limit of 1 standard deviation means that the ceiling score would be 84 on the Stanford-Binet and 85 on the Wechsler scales.

Clausen identified others who have criticized the concept of adaptive behavior. He noted that Nugler considered adaptive behavior to be a vague criterion for defining mental retardation and that the British objected to emphasizing social criteria.

Responding to Clausen's criticisms, Wilson (1972) remarked,

the inclusion of AB allows the educational practitioner a great deal of freedom. By using AB, the educational practitioner is not locked into a prescribed educational and vocational format as would be the case if he relied solely on IQ (p. 94).

Wilson emphasized that adaptive behavior is an educationally relevant concept in the definition of mental retardation. He maintained that we have a large population of students who are close to normal, but are still in conflict with the

critical demands of the social environment.

Wilson also responded to Congdon's criticisms of using the ABS with the profoundly retarded. In a 1973 article, Congdon had stated, "experience at Lincoln State School with the ABS has suggested some difficulty with the scales for certain uses in their present form" (p. 20). Wilson suggested that the ABS could be modified for use with the profoundly retarded, especially if it were to be used for their training program.

Bhattachargya (1973) directed his criticisms against the AAMD-ABS rather than against adaptive behavior scales in general. He indicated that the AAMD-ABS has an arbitrary scoring system and that each point on the scale may not be equally distant from the point following or preceding it. Moreover, he believed that

the additive method recommended in obtaining a total score is subjected to skepticism, unless the relationship between the various subdomains and even various points of the scale to the total score are determined (p. 27).

Bhattachargya went on to identify four ways in which the AAMD-ABS could be improved. These can be briefly summarized as follows:

(1) Making the number of points on each scale uniform for each sub-division. The descriptions of each point on the scale may be made more significant by keeping the

distance between the two points approximately equal.

(2) Adding new dimensions such as self-concept, self-confidence, and environmental awareness to the adaptive behavior scale in order to make it more comprehensive.

(3) Reducing the overlap between traits by placing some of the dimensions of the same variable on the same continuum. Placing both positive and negative traits on the same scale may help the rate to attain a better perspective.

(4) Developing a profile of the information on the relative standing of each retarded person on each variable. This may be a suitable device for obtaining a comprehensive picture of each retarded individual.

In spite of the above criticisms, the concept of adaptive behavior and the adaptive behavior scale are valuable contributions to the process of diagnosing and placing mentally retarded individuals. The AAMD-ABS continues, even with its limitations, to be the most comprehensive and accurate scale for assessing adaptive behavior.

Translating Materials for Cross-Cultural Research

A language is a code whereby ideas about the world are represented through a conventional system of arbitrary signals for communication (Bloom and Lahey, 1978, p. 4).

Questions about the role of language appear in all cross-cultural research, particularly when researchers try

to translate their ideas, methods, tests, and results into another language. In order to achieve equivalent versions of the original language, researchers must address the problems associated with translations.

Equivalent Translations in Cross-Cultural Research

The ultimate goal of translation is to have an equivalent version of the original version. Secherest, Fay, and Zaidi (1972) outlined five areas of equivalence between the target and the original versions. These areas are listed below, as is a discussion of some of the problems associated with each area.

Vocabulary Equivalence. This problem frequently occurs because it is not always easy to find an equivalent word in the second language. Often, even an excellent dictionary cannot solve the problem—dictionary language is not the language of the people and, furthermore, dictionaries define words in a number of ways. Vocabulary equivalence can be achieved by (1) using "translators who have a good acquaintance with the language as used by the prospective test respondents" (Secherest, Fay, & Zaidi, 1972, p. 44) and (2) using several words in the target language in order to convey an idea that is expressed in one word in the original language.

Idiomatic Equivalence. Idiomatic equivalence is another problem in cross-cultural research. Because idioms that are

found in one language may not be found in the other, idioms are seldom translated properly. This problem can be solved by (1) avoiding idioms [this is not the ideal solution] or (2) providing the equivalent meaning of the idioms in the target language.

Grammatical-Syntactical Equivalence. This problem arises because the original and target languages may use different grammar and syntax. These differences affect the meaning of the translated language since the two languages may not have equivalent parts of speech (e.g., verbs, adverbs, and adjectives). The problem of grammatical-syntactical equivalence can be solved by working towards conceptual equivalence and avoiding literal translations that do not give the same meaning.

Experiential Equivalence. Problems in experiential equivalence occur when two cultures use different terms to refer to actual items and experiences. Differences between two cultures (i.e., the nature of their objects, their social arrangements, their way of life, and their experiences) make it difficult to achieve equivalent meanings between the original and the target language "no matter how carefully the translation is done from the standpoint of the language involved" (Werner and Campbell, 1973, p. 47). This type of translation is called "cultural translation" and is distinct from "linguistic translation." The problem of equivalent

translation can be solved by first analyzing the term in the original language, then finding an equivalent term in the target language.

Conceptual Equivalence. The problem of conceptual equivalence arises when the same concept is interpreted in two different ways due to differences between the two cultures. In other words, a concept in one language implies something different than the same concept would imply in another language or culture. The problem of conceptual equivalence can be solved by understanding the two cultures, recognizing how they use concepts in different ways, and finding the equivalent term or concept in the target language.

Translation Techniques

Briefly described below are four basic techniques that researchers have employed to translate materials from one language to another.

Direct Translation. In this approach, translators who are bilingual try to translate materials from one language to another as best they can. Secherest, Fay, and Zaidi (1972) have commented that the direct translation procedure is the most commonly used procedure to achieve an equivalent translation. This technique has frequently been used in translating brief materials, questionnaires, and interviews and probably continues to be characteristic of the majority of

anthropological translations.

One disadvantage of this procedure is that it can be a source of peculiar translation when done by a single translator who is not sufficiently skilled in one of the languages. Secherest, Fay, and Zaidi noted that the procedure is not adequate for translating long materials. They suggested that direct translation should be rejected when there are other alternatives.

Pretest. Brislin (1970) noted that, in this technique, a careful translation is field-tested to insure that future subjects will understand all of the questions. Interviewers use a random-probe technique in which they select a random sample of questions and ask specific questions to make certain that the subjects understand the meaning of the original questions.

Decentering. This technique involves modifying the content of the translated form when the original language does not contain the same content. Brislin (1970) indicated that the term is used to refer "to a translation process in which the source and the target language version are equally important during the translation procedure" (p. 186).

Secherest, Fay, and Zaidi (1972) identified two major disadvantages to the decentering technique: (1) the length of materials that can be produced is limited, and (2) there

are severe limitations on the number of languages in which one may work. Decentering requires a genuinely multilingual translator rather than one who is merely bilingual.

Back-translation. Brislin (1970) described the back-translation procedure as follows:

Two bilinguals are employed: One translating from the source to the target language and the second blindly translating back from the target to the source. The investigator now has two versions in the original language which, if they are identical, suggests that the target version form in the middle of the process is equivalent to the source language forms (p. 186).

Werner and Campbell (1970) suggested that the back-translation procedure is distinctly superior to direct translation. They developed the following rules for use in the back-translation process:

- Use simple sentences.
- Use nouns rather than pronouns.
- Avoid metaphors and colloquialisms.
- Avoid English passive tense.
- Avoid phrasings or the subjunctive mood.

Brislin (1970) identified four stages in back-translation:

original → target → target → check original

After noting that the back-translation procedure should be combined with other procedures (e.g., the pretest procedure) in order to have an equivalent translation, Brislin suggested that a seven-step procedure should be used in translating:

(1) Write an English form that is likely to be translatable.

(2) Secure competent translators familiar with the content involved in the source language materials.

(3) Instruct one bilingual person to translate from the source to the target language, and another to blindly translate back from the target to the source.

(4) Have several raters examine the original, target, and/or the back-translated versions for errors that lead to differences in meaning. If possible, have another rater answer questions after having read only one of the versions. If errors are found, repeat Step 3, changing the original original English when necessary, using the process known as "decentering."

(5) When no meaning errors are found, pretest the translated materials on target language-speaking people. Revise the translations and/or the original English in light of insights gained during the pretest. Ask a bilingual to critically examine the translation.

(6) To finally demonstrate translation adequacy, administer the materials to bilingual subjects, some who see the English version, some who see the translation, and some who see both. Responses should be similar across the groups, as assessed by means, standard deviations, and correlation coefficients.

(7) Report experiences using the different criteria for equivalence (p. 214).

Secherest, Fay, and Zaidi (1972) identified two possible reasons for discrepancies between translations and the original: (1) the original translation may be inadequate because the translator has insufficient skills in the language or culture, and (2) the absence of a satisfactory word or, at the least, the lack of equivalent concepts in the two

languages. Despite these obstacles, the authors believed that back-translation can be advantageous in that it "operates as a filter through which non-equivalent terms will not readily pass" (p. 53). The sources of discrepancy between the two versions could be minimized by using bilingual consultants and more highly educated professionals.

Rationale for Selecting the Back-Translation Procedure

Back-translation has a number of advantages over the other procedures. In their 1973 article, "Translating, Working through Interpreters, and the Problems of Decentering," Werner and Campbell commented that back-translation is "the most powerful tool available to the investigator in training his interpreters" (p. 413). They indicated that back-translation offers social scientists some degree of discipline and some insight into the quality of their translators. It also

- Informs the investigator of what part of his content can be successfully asked and what part of his social science interest is uncommunicable, at least with the translation talent available.
- [Acts] as a short-cut approach to ethnotaxonomy in a given domain.
- Provides a most useful technique for suggesting revisions of the original, as well as revisions of the first translation effort....[and] an epistemological model for the difficult process of decentering.
- Provides an ideal conceptualization of decentered translating (pp. 412-415).

The back-translation procedure is especially useful in translating personality, attitude, and ability tests. However, it is less useful when used with projective techniques.

Phillips (1959) used back-translation to translate a psychological test, the Sentence Completion Test, from English to Thai. In translating this test, which uses a projective technique, Phillips encountered two major problems: (1) the English scale could not be revised until after the back-translation procedure had been abandoned, and (2) the group of translators had inadequate skills.

Fink (1963) used back-translation to translate an attitude scale from English to Lao. Bilingual translators who spoke Thai and either English or Lao were used in the study which translated the scale from English to Thai to Lao and from Lao to Thai to English. Fink found that there was a difference in meaning between the translated versions and the original version.

Werner and Campbell (1970) used the back-translation procedure to translate passages from English to Navajo. They compared the original English version with the Navajo translation and discovered that there were conceptual differences between the two versions. In spite of this drawback, they reported that back-translation was the most useful translation technique.

In collaboration with 94 students from the University of Guam, Brislin (1970) used back-translation to translate information about three content areas (facts about painting, methods of childrearing, and the intelligence of the black and white races) from English into one of nine Austronesian languages. A back-translation procedure was used to translate the content areas (each of which contained 300 words) from the Austronesian languages into English. Analysis of variance and factorial design were employed to develop criteria for back-translation procedures.

In that same study, Brislin reported that many researchers (Jacobson, 1954; Hudson, Barakat, and Laforage, 1959; Kluckhohn, 1960; Lambert and Klineberg, 1967; Gough, Chum, and Yang-Eun, 1968; Kandel, Lesser, Roberts, and Weiss, 1968; Bass, 1968; and Tanaka and Vassilion, 1969) have had good results in using the back-translation procedure.

Criteria for Using Back-Translation

Though the level of difficulty and the length of the translated materials, as well as the qualifications of the translator, affect the quality of the translation, Brislin (1970), Werner and Campbell (1973), Fink (1963) and Miller and Beebe-Center (1956) have identified five criteria that should be considered while using the back-translation

procedure. While the criteria discussed below are still tentative, they provide a useful guide for translators.

The Meaning Criterion. The meaning criterion compares the meaning in the original language with that in the target language (Werner and Campbell, 1973; Fink, 1963).

Brislin (1970) suggested two procedures for applying the meaning criterion to translations. In the first procedure, monolingual raters count the meaning errors. These errors are then compared by one of two methods:

The first is the correlation between number of errors found by two or more raters over a large number of passages. The second is the percentage overlap in different raters finding exactly the same meaning errors (p. 192).

In the second procedure, bilingual raters count the meaning errors. Bilingual errors and monolingual errors are then compared. The latter is a more direct test of original-target language equivalence than is the first procedure. The correlation coefficients comparing the number of errors between two raters should be high.

The Bodily Movements Performance Criterion. The bodily movements criterion compares subjects' bodily movements after they have heard either the target or the original language instructions. Similarity among all subjects indicates that instructions in the target and original language are equivalent (Miller and Beebe-Center, 1956).

The Similar Response Criterion. The similar response criterion is based upon the similarity of subjects' answers when they are asked questions in the target or original language. Equivalent answers among subjects indicates that the original language and the target language versions are equivalent (Miller and Beebe-Center, 1956).

The Questionnaire Criterion. The questionnaire criterion compares the responses of four bilingual, randomly selected groups to a questionnaire written in the target and original language. The first group sees the original language version, the second sees the target language version, the third sees the first half of the original language version, and the fourth group sees the first half of the target language version. Miller and Beebe-Center (1956) noted

if the two versions are equal, then item frequencies should be the same, as should the total score for the entire questionnaire across groups, and the correlation between original and target language scores for groups three and four should be high (p. 193).

Chapter III

RESEARCH DESIGN AND METHODOLOGY

The process of developing a Jordanian adaptation of the AAMD Adaptive Behavior Scale, Public School Version, Part I (AAMD-ABS) included the following tasks:

- Translating the AAMD-ABS into the Arabic language.
- Administering the Arabic form to a Jordanian sample that included nonhandicapped (NH) and mentally retarded (MR) children of various ages and levels of functioning.
- Determining the Jordanian form's ability to discriminate between age levels and between NH and MR children.
- Comparing the scores of Jordanian students with those of US students as one approach to evaluating the Jordanian ABS.

This chapter is divided into two major sections. The first section provides general information about centers and programs for mentally retarded children in Jordan, the criteria used to classify mentally retarded children in Jordan, and government schools for nonhandicapped children in Jordan. The second section describes the methodology used to select the subjects for the study, translate the

AAMD-ABS into Arabic, administer the scale to the sample population, and analyze the data from the study.

Programs for Mentally Retarded
and Nonhandicapped Children in Jordan

Mentally retarded children in Jordan may receive services through centers and programs sponsored by the government, local associations or foreign organizations.

Centers Sponsored by the Government

The Ministry of Social Development, Department of Special Education, sponsors and supervises two main centers for mentally retarded children: the Al-Manar Center of Zerka and the Al-Manar Center of Irbed. These centers provide services for about 120 children (mildly, moderately, and severely retarded) between the ages of 6 and 16. Free academic and social services are offered in order to help the children learn and adjust to their environment (Jordan, Department of Social Affairs, 1979).

The centers offer day-care services from 8:00 a.m. to 2:00 p.m. six days a week. The academic year for these centers is the same as that for schools for nonhandicapped students. Most of the staff members have a degree in teacher education or social work (two years after high school). The directors have a B.A. in psychology or education. In-service

training programs are offered for the staff members of both centers.

Centers Sponsored by Local Associations

The Mental Health Association (MHA), Young Women's Muslim Association (YWMA), and the National Association for the Mentally Retarded Handicapped (NAMRH) provide services for mentally retarded children. These services are financed through private donations, fund-raising activities, and government subsidies.

Mental Health Association Centers. The Mental Health Association, which was founded in 1972, has as one of its objectives looking after mentally retarded persons and training them to usefully occupy their time (MHA, 1979). The association operates three centers:

- The Center of Special Education in Amman provides educational and social services for 100 mildly, moderately, and severely retarded children between the ages of 6 and 18. The children are transported daily from their homes to the center.
- The Center of Special Education in Wadi Al-Sear was established in 1979 to provide educational and social services for 50 mentally retarded children between the ages of 6 and 12. The center is a residential center that offers full services (e.g., accommodations, food, and

clothing).

- The Center of Special Education in Baga Camp provides educational and rehabilitation services for 40 mentally retarded children between the ages of 6 and 12. Hot lunches and transportation are provided for the children.

Most of the 33 staff members at the MHA centers have degrees in social work (two years after high school). Additional training is provided through in-service programs (MHA, 1979).

Young Women's Muslim Association Center. Established in 1972, the Young Women's Muslim Association has as one of its activities the operation of a center for mentally retarded children. The center has about 13 full-time teachers who work with 90 students between the ages of 4 and 16. Most of the teachers have attended in-service training sessions in the United States, the United Kingdom, or Egypt. Students receive free transportation, meals, stationary, and some clothing. Fees are nominal; needy students are admitted free (YWMA, 1980).

National Association for the Mentally Retarded Handicapped Center. In 1980, the National Association for the Mentally Retarded Handicapped founded a new center for mentally retarded children in Amman. The center currently serves 15 children between the ages of 3 and 7, but the

planned total capacity of the center is 25 children. Four teachers, the majority of whom have teacher education certificates, are employed by the center.

Centers Sponsored by Foreign Organizations

Two foreign organizations, the Swedish Organization for Individual Relief and the Christian Reformed World Relief Committee (CRWRC) of the United States, provide services for mentally retarded individuals in Jordan.

The Swedish Organization for Individual Relief. A non-profit organization that depends primarily on voluntary contributions from private donors, the Swedish Organization for Individual Relief was founded in 1938. In 1966 the organization began operations in Jordan and in 1967 signed an agreement with the Ministry of Social Affairs and Labour. In this agreement, the Swedish Organization promised to initiate services for mentally retarded children. The organization currently offers five types of services for mentally retarded children:

- A carehome is equipped to accommodate 50 children who are severely retarded. The goal of this home is to offer training and therapy for the children as well as relief and advice for the family.
- Special day schools provide services for 90 mildly to moderately retarded children

between the ages of 6 and 14. Activities at these schools focus on sensory-motor exercises, communication skills, expressive art, and daily living skills.

- A vocational training center offers a social and work-oriented program that includes functional academics. It is designed for mentally retarded students who are over 14 years old.
- A family services program includes regular home visits to the families of mentally retarded children and financial assistance to needy families.
- Sheltered workshops for girls were established in 1979.

A total of 60 persons are employed in Swedish Organization programs for the mentally retarded. With the exception of five specialists from Sweden, who advise and train local personnel, all of the employees are Jordanians (Swedish Organization for Individual Relief, 1979).

The Christian Reformed World Relief Committee. From 1972 to 1979, the Christian Reformed World Relief Committee of the United States of America (CRWRC) provided services for handicapped individuals in cooperation with the Ministry of Social Affairs. The CRWRC worked directly and indirectly with the handicapped; they provided direct financial and educational services for handicapped individuals and worked with other organizations that provided services for the

handicapped. The CRWRC conducted two studies on the handicapped in Jordan: A Survey of the Handicapped in the Irbed Governate of Jordan (Kok, 1976) and A Study of the Institutions Serving the Handicapped in Jordan (Kok, 1978).

Criteria Used to Classify Mentally Retarded Children in Jordan

After meeting with the directors of all of the special education centers involved in the study and with representatives from the Department of Special Education at the Ministry of Social Development, the researcher found that all special education centers in Jordan classify mentally retarded children as being mildly, moderately, or severely retarded. However, there is no standardized procedure that is used by all of the centers: the MHA centers use one procedure, the YWMA center uses another, the government centers use still another, etc. The following sections briefly describe the procedures used by the different centers.

In general, the process of classifying mentally retarded children in Jordan includes three steps:

- (1) Referring the child to a special education center for assessment. This may be done by physicians, principals of regular schools, or parents.

(2) Admitting the child to a center for observation. Staff members observe the child for a period of time (typically one week).

(3) Administering a local assessment instrument and preparing a case study. The assessment instruments differ from one center to another, but in all cases the results are used to classify mentally retarded children.

Even though some of the children's records include IQ scores, formal testing has not been used to classify mentally retarded children as educable, trainable, or severely retarded. This is because there is no IQ scale that could be used and the process of standardizing the Stanford-Binet and Wechsler scales has not been completed.

Government Centers. Government centers use a case study booklet that includes information on (1) general background, (2) parental background, (3) disabilities, (4) rehabilitation and training efforts, and (5) recommendations and training. This booklet is completed by the director of the center. After a case study has been developed, a committee comprised of the director, teaching supervisor, teachers, social workers, and the family counselor must interview each new child. During the interview, the child is evaluated on color discrimination, size discrimination, math, vocabulary, mobility, following directions, and sorting. The committee uses this evaluation to classify the child as educable, trainable, or severely retarded. During the next three

months, the child is observed to discover how well he/she is able to adjust to the new situation.

Mental Health Association Centers. The Mental Health Association centers use four types of booklets to assess mentally retarded children:

(1) The General Development Assessment Booklet. This booklet is used to gather information related to a child's

- General Background.
- Social Behavior. (This section includes information on the child's participation in family group activities, adjustment to the family living group, ability to transfer experiences, ability to express him/herself, knowledge of his/her own properties, ability to build friendships, and acceptance or rejection of others.
- Sleeping and Waking Schedule.
- Emotional Behavior.
- Self-Care Skills. (This section includes the following items: dressing, washing one's face, brushing one's teeth, using the toilet, combing one's hair, and bathing.)
- Eating Habits. (This section includes information on areas such as eating independently, drinking, and setting the table.)
- Personal Hygiene.

(2) The Student Comprehensive Study Booklet.

This booklet, which is similar to a case study booklet, is used to gather

- General Information. (Name, date of birth, etc.)
- Parental Background Information. (Family income, the status of the parent's relationship, family size, family disease history, alcoholism, psychoses, and neuroses.)
- Pregnancy Information. (Delivery, date when parents first noticed that child is not normal, diagnostic procedures, medications.)
- School Information. (Date admitted/terminated from school, academic evaluation, adjustment to school.)
- Social Adjustment Information. (Home and neighborhood environment.)

(3) The Social Behavior Booklet. This booklet includes four categories. Each item in the booklet represents three to four levels of ability. The categories are

- Eating (7 items)
- Personal Hygiene (9 items)
- Dressing (5 items)
- Behavioral, Social Development, and Communication (13 items)

(4) The Training and Educational Evaluation Booklet. This booklet lists 79 items that have been divided into 14 categories. Each item represents three to four levels of ability. The categories include

- Reading (10 items)
- Writing (6 items)
- Math (9 items)
- Time Awareness (5 items)
- Recognition and Perception (4 items)
- Money Handling (3 items)
- School Responsibility (3 items)
- Comprehensive Understanding (7 items)
- Communication (7 items)
- Social Activities Interaction (5 items)
- Self-Care (9 items)
- Social Skills (7 items)
- General and Local (Domestic) Information (4 items)
- Psychological Observations, Comments by Teachers and Social Workers

Young Women's Muslim Association Center. The Young Women's Muslim Association Center uses two procedures for classifying mentally retarded children:

- (1) Interviewing the child and completing a case study, and
- (2) Classifying the child according to the Progress Assessment Chart (PAC). This scale,

which was developed by Gunzburg for use in the United Kingdom, has been translated into Arabic but has not been adapted or standardized for use with the Jordanian population.

Swedish Organization for Individual Relief. The Swedish Organization uses three procedures for classifying mentally retarded children:

(1) The Progress Assessment Chart (PAC), and

(2) The Case Study Sheet. This sheet includes 19 items that are to be completed by the social worker. The items ask for general information regarding

- Name, Age, Address, and Referral
- Physical Capabilities (standing, walking, sitting, etc.)
- Self-Care Capabilities (toilet use, feeding, etc.)
- General Behavior
- Diagnosis
- Placement and Reasons for Placing Child

(3) The Social Assessment Booklet includes 21 areas. Each area has a range of 6 levels of ability (from positive to negative statements). The areas are:

- | | |
|-------------------|------------|
| ● Social Contact | ● Painting |
| ● Drinking | ● Cutting |
| ● Eating | ● Sewing |
| ● Toilet Training | ● Coloring |

- Dressing
- Playing
- Domestic Activities
- Music
- General Behavior
- Big Motor Skills
- Fine Motor Skills
- Shaping
- Drawing
- Language
- Books
- Building
- Clay

Government Schools for Nonhandicapped Children

The majority of students in Jordan attend government-sponsored public schools. The educational system, which is free except for a nominal fee once a year, is divided into three levels: the elementary level which includes the first six grades, the preparatory level which includes the next three grades, and the high school level which includes the last three grades. The public schools serve a cross-section of the Jordanian population. There are no mixed classrooms of males and females, although programs are offered for each group. The curriculum is centralized and is designed by the Department of Curriculum in the Ministry of Education. Classes have an average of 40 students, and teachers must have a teaching certificate as part of their qualifications for employment.

Research Design

Selection of the Sample

A sample of 150 Jordanian students was selected from government elementary schools and centers for mentally retarded children in Amman Governorate. The sample represented three age levels for nonhandicapped children (7^3-8^2 , 9^3-10^2 , and 11^3-12^2)* and two levels of mental retardation (educable/mild and severely mentally retarded). The distribution of the sample is outlined in Table 3.

Table 3. Distribution of Nonhandicapped and Mentally Retarded Students Selected for the Sample

Age Level	Nonhandicapped	Mentally Retarded	
		EMR	SMR
7^3-8^2	30	-	-
9^3-10^2	30	-	-
11^3-12^2	30	30	30

EMR = Educable/Mildly Mentally Retarded
 SMR = Severely Mentally Retarded

* 7^3 = 7 years, 3 months; 8^2 = 8 years, 2 months; etc.

The limits for each age level were set to be consistent with the limits used in the tables of norms for the original AAMD-ABS, Public School Version. This was done so that the Jordanian and U.S. scores could be compared.

Mentally Retarded Students. The sample of mentally retarded students was selected from governmental and non-governmental centers for the mentally retarded. The sample included males and females since the centers for the mentally retarded have mixed classroom settings.

Five centers were selected for the study: Al-Manar, the government-sponsored center; the two MHA centers; the YWMA center, and the center operated by the Swedish Organization for Individual Relief. The director of each center was asked to prepare a list of all of the children who met the age and retardation level criteria and to identify the teachers who were best-acquainted with these children. Because the teachers at the centers were generally not familiar with more than 10 children, a random sample procedure was not used. All of the available children who fit the criteria were selected for the study. The distribution of the mentally retarded sample is presented in Table 4.

Table 4. Distribution of Mentally Retarded Students
Selected for the Sample

Center	Source of Financial Support	Age Level	EMR	SMR	No. of Teachers Interviewed
Al-Manar	Government	11 ³ -12 ²	8	5	6
MHA #1	Local	11 ³ -12 ²	11	7	6
MHA #2	Local	11 ³ -12 ²	6	4	4
YWMA	Local	11 ³ -12 ²	5	10	7
Swedish Organization	Foreign	11 ³ -12 ²	-	4	1

Nonhandicapped Students. The sample of nonhandicapped (NH) students was selected from two government elementary schools. The sample included only males in order to use smaller subgroups. The smaller groups were justified since the study was not intended to be a comprehensive standardization study.

Two government schools were randomly selected for the study: Al-Gebaha and Zead Ben Al-Katab. The directors of the two schools were asked to prepare a list of children who met the age level criteria and to name teachers who were well-acquainted with these children (i.e., who had worked with them at least since the beginning of the 1979-1980 school year). Since it was likely that each teacher knew only a few children, teachers were asked to specify the ten

children in their grade level with whom they were most acquainted. The distribution of nonhandicapped students is outlined in Table 5.

Table 5. Distribution of Nonhandicapped Students Selected for the Sample

School	Age Level	Grade Level	Number of Students in Sample	Number of Teachers Interviewed
Al-Gebeha	7 ³ -8 ²	2nd	30	3
Zead Ben Al-Katab	9 ³ -10 ²	4th	30	3
	11 ³ -12 ²	6th	30	3

The Translation Process

A number of steps were undertaken in translating the AAMD-ABS into Arabic. The researcher first translated the AAMD-ABS from English to Arabic.* The instructions and each item were translated word by word and sentence by sentence in order to obtain an equivalent and meaningful translation form. During this process, the following areas of concern became evident:

- (1) Many words and phrases in English have several synonymous meanings in Arabic. Thus, terms such as "statement," "eating in public,"

* Arabic is the native language of the researcher.

"item," "napkin," "plate," "regulation,"
 "toilet," "credit," "considerable," "spreading,"
 "spilling," "blocks," "hangs down," "telephone
 messages," "tokens," "accelerated," "primitive
 phrases," "time intervals," and "time equivalents"
 all have more than one meaning in Arabic or
 English.

For example, in English, the term "plate"
 can mean

(a) a smooth, relatively thin, rigid
 body of uniform thickness, (b) a sheet
 of hammered, rolled, or cast metal,
 (c) a shallow dish from which food is
 served or eaten (The American Heritage
 Dictionary, 1976, p. 541).

In Arabic, the term "plate" has several syno-
 nyms including **طبق** and **صحن**.

Another example is the word "item." In
 English, the word can mean

(a) a single unit in a list, account,
 or series, (b) a bit of information
 or a short piece in a newspaper (The
 American Heritage Dictionary, 1976,
 p. 379).

In Arabic, the word "item" has several
 synonyms including **فقره** and **بند**.

The researcher included all of the possible
 synonyms in the first draft so that the most
 common or acceptable term could be chosen later.

(2) Many of the concepts used in the English
 version are not common or appropriate for the
 Jordanian population. For example, "hamburgers,"
 "hot dogs," "using a knife and fork," "using a
 napkin," "wearing overshoes," "use of work and

dress shoes," "using a train or airplane as a means of transportation," "using subways," "welfare," "using bank services" (such as checking and savings), "using tokens," and "using teacher aides," were deemed to be inappropriate to the Jordanian situation.

These concepts were included in the first draft in order to have a basis for later determining which concepts would be most appropriate for use in Jordan.

(3) Many of the concepts in the English version are not clear or have an ambiguous meaning, particularly when they are translated literally into Arabic. For example, "is at someone's elbow," "tiptoe," "circle only one," "check all statements which apply," "banking services," "drinking," "pay telephone," "accessories," and "dollars" could have several meanings in Arabic.

The researcher translated these concepts with more detail to assure that they had the same meaning in the Arabic version. This is why the Arabic version is longer than the original English version.

Ten bilingual Jordanian graduate students at Michigan State University were asked to review the draft. The researcher sought 80 percent agreement among the students regarding the meaning of the items, their understanding of the instructions, and their comments on the translation. The

students met as a group in two different sessions. At these sessions, the researcher:

(1) Summarized the overall idea of the AAMD-ABS and the reasons for translating it into Arabic.

(2) Read the Arabic form of the AAMD-ABS to the group sentence by sentence and paragraph by paragraph. During the reading, the researcher identified possible areas of ambiguity or problems in translation.

(3) Asked the group what the sentences meant to them, if the sentences were clear, if there were any confusing words, and if there were any alternatives.

(4) Recorded the sentences after the group had reached 80 percent agreement.

Once agreement had been reached on the first draft, the researcher prepared a second draft of the Jordanian AAMD-ABS. In this draft, one agreed upon, common synonym for a word that could have many meanings was used. In addition, idioms and phrases that were not clear or were ambiguous were changed to be suitable for the Jordanian culture.

Back-Translation Procedure. The back-translation procedure was used to assure that the Jordanian form was equivalent to the original version of the AAMD-ABS (see "Rationale for Selecting the Back-Translation Procedure," p. 35). Two back-translations were prepared so that more than one version could be compared with the original AAMD-ABS. The two versions

represented the work of translators with different backgrounds. The first version was prepared by a faculty member at the University of Jordan, while the second version was prepared by a post-graduate student in educational psychology at Michigan State University. The post-graduate student had lived in the United States for the past 25 years but spoke Arabic as her native language. The Jordanian faculty member had spent most of his life in Jordan.

The researcher developed an evaluation form that could be used to evaluate the differences between the Arabic target-language version, the two back-translations, and the original English version (see Appendix A). A group of six professionals and students at Michigan State University used the meaning criterion to compare the different versions. Two monolingual raters compared the original form of the AAMD-ABS with the back-translation done by the faculty member, another two monolingual raters compared the original English version with the back-translation done by the post-graduate student, and two bilingual raters compared the original English version with the Arabic version developed by the researcher.

The two raters who compared the original English version with the back-translation form by the Jordanian faculty member had 82 percent agreement that there was no discrepancy in meaning; the two raters who compared the original English version with the back-translation form by the post-graduate

student had 89 percent agreement that there was no discrepancy in meaning; and the two bilingual raters who compared the original English version with the Arabic (target-language) version had 98 percent agreement that there was no discrepancy in meaning (see Appendix B). An estimate of the reliability of agreement between the raters was calculated by "dividing the smallest recorded frequency by the larger recorded frequency and multiplying by 100" (Kazdin, 1980, p. 92).

The researcher and a faculty member from the University of Jordan carefully reviewed the second draft of the Jordanian AAMD-ABS. They modified the draft as follows:

(1) One of the statements on the instruction page was changed from "source of information and relation to person being evaluated" to "source of information and relationship to person being evaluated such as:

Father _____ Mother _____

Teacher (by name) _____

Place of observing the child:

Classroom _____
 Home _____
 Restaurant _____
 Workshop _____
 Other _____
 (be specific) _____

"

(2) The final, agreed upon synonyms of the words and phrases cited on pp. 55-56 were included.

(3) Some of the concepts that were mentioned on pp. 56-57 were modified. For example, "hamburgers" and "hot dogs" were replaced by "sandwiches" (Item 2). The translated version thus read "order some meals like sandwiches."

(4) Other concepts such as "using a knife and fork," "using a napkin," "wearing over-shoes," "formal and informal dress," "airplanes," "bank services," and "tokens" were retained in order to keep the original meaning of the scale. This was done because the present study was concerned with the adaptation process and not with the standardization process. Changing the concepts to conform with Jordanian concepts is part of the process of standardizing the AAMD-ABS.

(5) Some of the concepts that do not exist in Jordanian culture (e.g., "subways," "trains," "welfare facilities," and "teacher aides") were omitted.

(6) Some American idiomatic expressions (e.g., "is at someone's elbow," "tiptoe," "circle only one," and "check all statements which apply") were translated in detail in order to assure that the translation was meaningful.

(7) Some of the concepts in the original version of the AAMD-ABS were replaced. For example, "dollar" was changed to "dinar;"

"drinking" was changed to "handling liquids" since, in Jordan, the concept of "drinking" could mean "drinking alcohol;" and the word "block" was replaced by "50 meters," the estimated distance of a block.

Copies of the final Arabic form were distributed to 10 Jordanian faculty members at the Faculty of Education at Jordan University. In a cover letter, the researcher explained the purpose of the study and the AAMD-ABS and asked the faculty members to comment on (1) the administration and scoring instructions, (2) the clarity of the content, and (3) the appropriateness of the content to Jordanian culture.

The faculty members were asked to submit their comments within 10 days. The responses of the seven faculty members who responded within the time limit are summarized below.

(1) Most of the faculty members had no problem in understanding the administration and scoring instructions. Only two had questions about scoring procedures for the second type of items.

(2) Three faculty members had comments on the clarity of the content. They indicated that the translations of the following words and phrases were ambiguous:

- Item 1: "spreading and spilling"
- Item 7: "primitive language"
- Item 12: "prompting and cooperating"
- Item 23: "effective"

Item 38: "time equivalents"

Item 56: "is at someone's elbow
constantly"

(3) Five of the faculty members commented on the discrepancy between the U.S. and Jordanian cultures and emphasized the difference between the two cultures. Regarding the appropriateness of the translation, they noted,

- Using a knife and fork is not a common habit for the majority of the Jordanian people, especially for those from the middle and lower income classes. Spoons are the common utensils.
- Eating in restaurants is not as common in Jordan as it is in the United States.
- Using napkins is not a common habit in Jordan.
- Banking services are not as common in Jordan as they are in the United States.
- Sports is not as common a subject of conversation in Jordan as it is in the United States.
- Color combinations, work and dress shoes, formal and informal clothing, and wearing overshoes are functions of cultural values. These aspects of clothing might be more representative of U.S. rather than Jordanian culture. It is not common for Jordanians, especially those from the lower and middle classes, to have these values.

- Planning and budgeting for items such as fares, meals, and other expenditures are not common practices for the majority of normal people, much less for mentally retarded children.
- Leaving work without permission is a cultural value that differs from culture to culture.
- Using a telephone is not a common habit in Jordan because not all houses have telephones.
- Treating simple injuries such as cuts and burns or obtaining a doctor's or dentist's help are not easy tasks for normal children in Jordan. The faculty members questioned including these as responsibilities for mentally retarded children.
- Children in Jordan do not buy their clothing by themselves; they go shopping with their parents. This appears to be a cultural value that differs from one culture to another.

These comments were reviewed by the researcher and a faculty member from the Faculty of Education at the University of Jordan. They concluded that the comments on the clarity of some of the items were not critical, but the comments on the cultural appropriateness of certain items should be noted in the recommendations section of the study. The items were not changed because of the study's emphasis on adaptation, not standardization. A final version of the

Arabic form was prepared at that time. The Answer Sheet Booklet was translated as it is in the original form of the AAMD-ABS, Part I (see Appendix C).

Administering the Jordanian Version of the AAMD-ABS

A faculty member and three graduate assistants from the Department of Psychology at the Faculty of Education, Jordan University, worked with the researcher in administering the Jordanian ABS. During a one-week training period, the research team (1) reviewed the rationale for studying adaptive behavior, (2) reviewed the instructions for administering the ABS, (3) reviewed the ABS scoring system, and (4) administered the ABS on a trial basis.

The research team members then contacted the teachers of the children in the sample. They provided an overview of the nature and purpose of the Jordanian ABS and explained the procedure for administering the ABS. The teachers selected were those who were in charge of the appropriate age level at the time of the study and who had served as the children's teachers since the beginning of the 1979-1980 academic year. Each teacher was asked to provide information about the ten children with whom they were most familiar.

The study used the standard procedure for administering the AAMD-ABS as outlined in the AAMD Adaptive Behavior Scale Manual, Public School Version, 1975 Revision:

(1) Each one of the research team members completed the first page of the Answer Sheet Booklet. This page includes general information on the child who is being evaluated. This information was gathered from the child's teacher, the school social worker, and/or the director of the school or special education center.

(2) A combination of the third party assessment procedure and the interview method was used to administer the scale. In the third party assessment procedure, the student, the student's teacher, and one of the research members sat together while the research team member recorded the teacher's responses to Items 1-8, 10, 11, 14, 15, 17, 25, 26, 29, and 40-56. In the interview method, the research team member interviewed the nonhandicapped or mentally retarded student in order to get information on Items 9, 12, 13, 18-20, 24, and 28-38. The students answers or performances were then recorded.

In addition to the above standard procedures, each teacher was asked to indicate the following for each item:

(1) Whether or not the teacher has had the opportunity to observe the child or has certain knowledge regarding the behavior in the item. This type of response was marked "sure."

(2) Whether or not the teacher's knowledge about the child's behavior was inferred and based on a guess. This type of response was marked "guess."

(3) Whether or not the teacher felt able to make a judgement about the child. If not, this item was left blank.

Parents were not asked to participate in the study since most of the information in the ABS items could be collected from the teachers or by direct observation and interviews. This procedure was in accord with the instructions in the AAMD-ABS manual. Additionally, it should be noted that parents in the Jordanian culture are not typically as involved in educational programs for handicapped children as they are in the United States. Any attempt to gather information about their child might have created embarrassment or elicited other negative reactions. Because of this, and because of the time limitations of the study, communication problems, and the lack of accurate addresses, the researcher did not include parents in the study.

Analyzing the Data

Two types of data were collected as a result of administering the Jordanian ABS:

(1) The domain scores on each item of the scale, and

(2) The rating confidence level of the teachers' responses. These data were based on the teachers' judgements about each item including whether the behavior was observed or inferred and whether or not the teacher

felt qualified to make a judgement.

The concurrent validity (i.e., the ability of the domain scores to differentiate significantly among age levels and between nonhandicapped and mentally retarded children) of the Jordanian ABS was determined by using analysis of variance (ANOVA) as described in Borg (1971). The means of the domains of each of the various subgroups were analyzed, and an alpha level of .05 was used to determine the level of significance. These data provided one type of evidence for analyzing the adequacy of the Arabic form.

The reliability of the Jordanian ABS was estimated using the rater agreement procedure. In this procedure, the ratings of two individuals who are familiar with the same group of subjects are compared. The severely mentally retarded group was chosen for this analysis because of the recommendation that two teachers in the same institution would be familiar with the same group of 30 children. Pearson Product-Moment Correlations between the two sets of scores for each domain were used as domain score reliability coefficients.

The rating confidence level was determined by analyzing the distribution of three possible teacher responses to each item. In addition to responding to the particular item, teachers were asked to indicate whether their response was

"sure" (they had observed or had certain knowledge of the child's behavior), a "guess" (they had inferred the behavior), or "no judgement" (they had not observed the behavior). These responses were used to indicate the usefulness or lack of usefulness of the Jordanian ABS for assessing the mentally retarded population at the centers.

To conduct the analysis, the researcher took a random sample of five Answer Sheet Booklets from each subgroup. These five sheets represented 20 percent of each subgroup population (N=30). Adas (1972) has indicated that statisticians prefer a sample size representing 5 percent of the total population (p. 246). The total size of the random sample was 25 which represented 16.6 percent of the total population in the study (N=150). The responses were classified according to the three possible answers ("sure," "guess," and "no judgement") and the percentage of teachers responding to each possible answer was calculated. A high percentage (79 percent and over) was used as the criterion for determining the "appropriateness" or "lack of appropriateness" of each item.

The researcher also conducted a comparison of the domain scores of Jordanian and U.S. students. This was undertaken in order to use the U.S. domain scores as a reference base for evaluating the pattern of the Jordanian students' domain scores. The comparison was also used to determine

whether or not the two cultures had similar patterns of behavior at the same age levels. A "t" test was used to compare the scores from the three age levels and the scores of the educable/mildly mentally retarded groups. (The severely mentally retarded group was omitted because the U.S. standardization study did not include this group in its sample. An alpha level of .05 was used to determine the level of significance.

Chapter IV

FINDINGS OF THE STUDY

The data from the study were analyzed using the following steps:

(1) The Answer Sheet Booklets were graded using the procedure described in the AAMD Adaptive Behavior Scale Manual, 1975 Revision. Domain scores for the subgroups based on functioning level [nonhandicapped (NH), educable/mildly mentally retarded (EMR), and severely mentally retarded (SMR)] and age level (7^3-8^2 , 9^3-10^2 , and 11^3-12^2) were listed on summary sheets (see Appendix D). Codes were assigned to each domain, school, center, functioning level, and age level in order to facilitate dealing with the variables in the study (see Table 6).

(2) A computer program based on the Statistical Package for the Social Sciences (SPSS) (Nie, Hull, Jenkins, Steinbrenner, and Bent, 1975) was developed to meet the objectives of the study.

(3) The raw data were processed using facilities at the Michigan State University Computer Center.

The findings of the study are reported in sections consistent with the four objectives of the study (i.e., concurrent validity, reliability, rating confidence level, and a comparison of the pattern of U.S. and Jordanian scores).

Table 6. Codes of Domains, Schools, Centers, Functioning Levels, and Age Levels

Variable	Code
<u>Domain</u>	
Independent Functioning	IFU
Physical Development	PD
Economic Activity	EA
Language Development	LD
Number and Time	NT
Vocational Activity	VA
Self-Direction	SD
Responsibility	R
Socialization	S
<u>Schools</u>	
Al-Gebeha	1
Zead Ben Al-Katab	2
<u>Centers</u>	
Al-Manar	3
Mental Health Center #1	4
Young Muslim Women's Association Center	5
Swedish Organization Center	6
Mental Health Center #2	7
<u>Functioning Levels</u>	
Nonhandicapped Students (NH)	1
Educable/Mildly Mentally Retarded (EMR)	2
Severely Mentally Retarded (SMR)	3
<u>Age Levels</u>	
7 ³ -8 ²	1
9 ³ -10 ²	2
11 ³ -12 ²	3

Table 7. Mean, Standard Deviation, and Standard Error of Domain Scores by Different Functioning Levels (NH, EMR, and SMR)

Domain/Group	Mean	Standard Deviation	Standard Error	N
<u>Independent Functioning</u>				
Nonhandicapped	74.8333	2.5200	.4601	30
Educable/Mildly Retarded	45.9000	9.7179	1.7742	30
Severely Retarded	25.8667	8.0504	1.4698	30
<u>Physical Development</u>				
Nonhandicapped	24.0000	0	0	30
Educable/Mildly Retarded	21.667	2.9866	.5453	30
Severely Retarded	18.30000	4.47333	.8167	30
<u>Economic Activity</u>				
Nonhandicapped	12.0667	1.1427	.2086	30
Educable/Mildly Retarded	5.2667	2.1162	.3864	30
Severely Retarded	1.1667	1.2058	.2202	30
<u>Language Development</u>				
Nonhandicapped	37.0667	2.0667	.3773	30
Educable/Mildly Retarded	19.2333	5.1171	.9343	30
Severely Retarded	11.5667	4.0826	.7454	30
<u>Number and Time</u>				
Nonhandicapped	11.8333	.4611	.0842	30
Educable/Mildly Retarded	4.9333	2.7029	.4935	30
Severely Retarded	1.9000	1.8261	.3334	30
<u>Vocational Activity</u>				
Nonhandicapped	8.9333	1.7207	.3142	30
Educable/Mildly Retarded	6.6000	2.1270	.3883	30
Severely Retarded	3.9667	1.4967	.2733	30
<u>Self-Direction</u>				
Nonhandicapped	14.2667	2.7525	.5027	30
Educable/Mildly Retarded	9.8000	3.9252	.7166	30
Severely Retarded	4.8000	2.3983	.4379	30
<u>Responsibility</u>				
Nonhandicapped	4.3667	1.2172	.2222	30
Educable/Mildly Retarded	3.2000	1.6274	.2971	30
Severely Retarded	2.1000	1.7879	.3264	30
<u>Socialization</u>				
Nonhandicapped	20.0667	1.9989	.3649	30
Educable/Mildly Retarded	14.5333	3.9717	.7251	30
Severely Retarded	10.0000	2.6392	.4819	30

The Concurrent Validity of the Jordanian ABS

Analysis of variance (ANOVA) and the Multiple Range Test of Least Significant Difference (see Borg, 1971, and Nie, Hull, Jenkins, Steinbrenner, and Bent, 1975) were used to examine the Jordanian form's ability to significantly differentiate among three functioning levels (NH, EMR, and SMR) and among three nonhandicapped age levels (7^3-8^2 , 9^3-10^2 , 11^3-12^2).

Differentiation Among Functioning Levels

Table 7 contains information on the mean, standard deviation, standard error, and number of subjects for each domain and functioning level subgroup. The following sections present the results for each domain.

Independent Functioning (IFU) Domain. Table 8 contains the results of a one-way analysis of variance of Independent Functioning domain scores between and within different functioning levels (NH, EMR, and SMR).

Table 8. ANOVA Results of Independent Functioning Domain Scores Between and Within Different Functioning Levels (NH, EMR, and SMR)

Source	df	SS	MS	F
Between Groups	2	36362.0667	18181.0333	329.371*
Within Groups	87	4802.3333	55.1992	-
TOTAL	89	41164.4000	-	-

*Significant at the .001 level

Regarding individual differences between the means for each subgroup, the Multiple Range Test of Least Significant Difference indicates that there is a significant difference between each pair of means at the .05 level (see Table 7).

Physical Development (PD) Domain. Table 9 contains the results of a one-way analysis of variance of Physical Development domain scores between and within different functioning levels (NH, EMR, and SMR).

Table 9. ANOVA Results of Physical Development Domain Scores Between and Within Different Functioning Levels (NH, EMR, and SMR)

Source	df	SS	MS	F
Between Groups	2	492.6889	246.3444	25.546*
Within Groups	87	838.9667	9.6433	-
TOTAL	89	1331.6556	-	-

*Significant at the .001 level

Regarding individual differences between the means for each functioning level, the Multiple Range Test of Least Significant Difference indicates that there is a significant difference between each pair of means at the .05 level (see Table 7).

Economic Activity (EA) Domain. Table 10 contains the results of a one-way analysis of variance of Economic Activity domain scores between and within different functioning

levels (NH, EMR, and SMR).

Table 10. ANOVA Results of Economic Activity Domain Scores Between and Within Different Functioning Levels (NH, EMR, and SMR)

Source	df	SS	MS	F
Between Groups	2	1818.6000	909.3000	376.889*
Within Groups	87	209.9000	2.4126	-
TOTAL	89	2028.5000	-	-

*Significant at the .001 level.

Regarding individual differences between the means for each functioning level, the Multiple Range Test of Least Significant Difference indicates that there is a significant difference between each pair of means at the .05 level (see Table 7).

Language Development (LD) Domain. Table 11 contains the results of a one-way analysis of variance of Language Development domain scores between and within different functioning levels (NH, EMR, and SMR).

Table 11. ANOVA Results of Language Development Domain Scores Between and Within Different Functioning Levels (NH, EMR, and SMR)

Source	df	SS	MS	F
Between Groups	2	10270.5556	5135.2778	326.920*
Within Groups	87	1366.6000	15.7080	-
TOTAL	89	11637.1556	-	-

*Significant at the .001 level.

Regarding individual differences between the means for each functioning level, the Multiple Range Test of Least Significant difference indicates that there is a significant difference between each pair of means at the .05 level (see Table 7).

Number and Time (NT) Domain. Table 12 contains the results of a one-way analysis of variance of Number and Time domain scores between and within different functioning levels (NH, EMR, SMR).

Table 12. ANOVA Results of Number and Time Domain Scores Between and Within Different Functioning Levels (NH, EMR, and SMR)

Source	df	SS	MS	F
Between Groups	2	1554.8222	777.4111	214.895*
Within Groups	87	314.7333	3.6176	-
TOTAL	89	1869.5556	-	-

*Significant at the .001 level.

Regarding individual differences between the means for each functioning level, the Multiple Range Test of Least Significant Difference indicates that there is a significant difference between each pair of means at the .05 level (see Table 7).

Vocational Activity (VA) Domain. Table 13 contains the results of a one-way analysis of variance of vocational activity domain scores between and within different

functioning levels (NH, EMR, and SMR).

Table 13. ANOVA Results of Vocational Activity Domain Scores Between and Within Different Functioning Levels (NH, EMR, and SMR)

Source	df	SS	MS	F
Between Groups	2	370.4667	185.2333	57.140*
Within Groups	87	282.0333	3.2418	-
TOTAL	89	625.5000	-	-

*Significant at the .001 level.

Regarding individual differences between the means for each functioning level, the Multiple Range Test of Least Significant Difference indicates that there is a significant difference between each pair of means at the .05 level except for the means for the educable/mildly retarded and the non-handicapped subgroups (see Table 7).

Self-Direction (SD) Domain. Table 14 contains the results of a one-way analysis of variance of Self-Direction domain scores between and within different functioning levels (NH, EMR, and SMR).

Regarding individual differences between the means for each functioning level, the Multiple Range Test of Least Significant Difference indicates that there is a significant difference between each pair of means at the .05 level (see Table 7).

Table 14. ANOVA Results of Self-Direction Domain Scores
Between and Within Different Functioning Levels
(NH, EMR, and SMR)

Source	df	SS	MS	F
Between Groups	2	1345.6889	672.8444	70.234*
Within Groups	87	833.4667	9.5801	-
TOTAL	89	2179.1556	-	-

*Significant at the .001 level.

Responsibility (R) Domain. Table 15 contains the results of a one-way analysis of variance of Responsibility domain scores between and within different functioning levels (NH, EMR, and SMR).

Table 15. ANOVA Results of Responsibility Domain Scores
Between and Within Different Functioning
Levels (NH, EMR, and SMR)

Source	df	SS	MS	F
Between Groups	2	77.0889	38.5444	15.783*
Within Groups	87	212.4667	2.4421	-
TOTAL	89	289.556	-	-

*Significant at the .001 level.

Regarding individual differences between the means for each functioning level, the Multiple Range Test of Least Significant Difference indicates that there is a significant difference between each pair of means at the .05 level (see Table 7).

Socialization (S) Domain. Table 16 contains the results of a one-way analysis of variance of Socialization domain scores between and within different functioning levels (NH, EMR, and SMR).

Table 16. ANOVA Results of Socialization Domain Scores Between and Within Different Functioning Levels (NH, EMR, and SMR)

Source	df	SS	MS	F
Between Groups	2	1525.0667	762.5333	85.564*
Within Groups	87	775.3333	8.9119	-
TOTAL	89	2300.4000	-	-

*Significant at the .001 level.

Regarding individual differences between the means for each functioning level, the Multiple Range Test of Least Significant Difference indicates that there is a significant difference between each pair of means at the .05 level (see Table 7).

Conclusion. The results of the analysis of variance and Multiple Range Test of Least Significant Difference of each domain by functioning level (NH, EMR, and SMR) indicate that all of the F values are significant at the .001 level and that all of the values of least significant difference are significant at the .05 level. The means for the nonhandicapped

group are consistently higher than the means for the educable/mildly retarded and the severely retarded groups. Similarly, the means for the educable/mildly retarded group are consistently higher than the means for the severely retarded group (see Table 7). This indicates that the Jordanian form of the AAMD/ABS, Public School Version, Part I, has concurrent validity and that it can differentiate between nonhandicapped, educable/mildly retarded, and severely retarded groups at a high level of significance.

Differentiation Among Nonhandicapped Age Levels

Table 17 contains information on the mean, standard deviation, standard error, and number of subjects for each domain and age subgroup (7^3-8^2 , 9^3-10^2 , and 11^3-12^2) of nonhandicapped students. The results of an analysis of variance and the Multiple Range Test of Least Significant Difference for each age group and domain are presented in the following sections.

Independent Functioning (IFU) Domain. Table 18 contains the results of a one-way analysis of variance of Independent Functioning domain scores between and within the different nonhandicapped age levels (7^3-8^2 , 9^3-10^2 , and 11^3-12^2).

Regarding individual differences between the means for each age subgroup, the Multiple Range Test of Least

Table 17. Mean, Standard Deviation, and Standard Error of Domain Scores by Different Nonhandicapped Age Levels (7^3-8^2 , 9^3-10^2 , and 11^3-12^2).

Domain/Age Level	Mean	Standard Deviation	Standard Error	N
<u>Independent Functioning</u>				
7^3-8^2	58.5000	4.1168	.7516	30
9^3-10^2	67.700	4.0565	.7406	30
11^3-12^2	74.8333	2.2500	.4601	30
<u>Physical Development</u>				
7^3-8^2	23.9667	.1826	.0333	30
9^3-10^2	24.0000	0	0	30
11^3-12^2	24.000	0	0	30
<u>Economic Activity</u>				
7^3-8^2	7.2999	1.8270	.3336	30
9^3-10^2	9.9000	1.5391	.2810	30
11^3-12^2	12.0667	1.1427	.2086	30
<u>Language Development</u>				
7^3-8^2	25.7667	3.0703	.5606	30
9^3-10^2	34.8333	2.4366	.4449	30
11^3-12^2	37.0667	2.0667	.3773	30
<u>Number and Time</u>				
7^3-8^2	6.8000	.9965	.1819	30
9^3-10^2	10.6667	1.7287	.3156	30
11^3-12^2	11.8333	.4611	.0842	30
<u>Vocational Activity</u>				
7^3-8^2	7.8000	2.1399	.3907	30
9^3-10^2	9.1000	1.9001	.3469	30
11^3-12^2	8.9333	1.7207	.3142	30
<u>Self-Direction</u>				
7^3-8^2	12.7333	4.6678	.8522	30
9^3-10^2	14.6667	3.2306	.5898	30
11^3-12^2	14.2667	2.7535	.5027	30
<u>Responsibility</u>				
7^3-8^2	4.6333	2.3413	.4275	30
9^3-10^2	4.7667	1.1651	.2127	30
11^3-12^2	4.3667	1.2172	.2222	30
<u>Socialization</u>				
7^3-8^2	18.5667	3.1914	.5827	30
9^3-10^2	20.4000	2.7493	.5020	30
11^3-12^2	20.0667	1.9989	.3649	30

Significant Difference indicates that there is a significant difference between each pair of means at the .05 level (see Table 17).

Table 18. ANOVA Results of Independent Functioning Domain Scores Between and Within Nonhandicapped Age Levels (7^3-8^2 , 9^3-10^2 , 11^3-12^2)

Source	df	SS	MS	F
Between Groups	2	4019.0889	2009.5444	151.648*
Within Groups	87	1152.8667	13.2513	-
TOTAL	89	5171.9556	-	-

*Significant at the .001 level.

Physical Development (PD) Domain. Table 19 contains the results of a one-way analysis of variance of Physical Development domain scores between and within different nonhandicapped age levels (7^3-8^2 , 9^3-10^2 , 11^3-12^2). The F test is not significant.

Table 19. ANOVA Results of Physical Development Domain Scores Between and Within Nonhandicapped Age Levels (7^3-8^2 , 9^3-10^2 , 11^3-12^2)

Source	df	SS	MS	F
Between Groups	2	.0222	.0111	1.000*
Within Groups	87	.9667	.0111	-
TOTAL	89	.9889	-	-

*Significant at the .3721 level.

Economic Activity (EA) Domain. Table 20 contains the results of a one-way analysis of variance of Economic Activity domain scores between and within different nonhandicapped age levels (7^3-8^2 , 9^3-10^2 , and 11^3-12^2).

Table 20. ANOVA Results of Economic Activity Domain Scores Between and Within Nonhandicapped Age Levels (7^3-8^2 , 9^3-10^2 , 11^3-12^2)

Source	df	SS	MS	F
Between Groups	2	365.6889	178.3444	76.296*
Within Groups	87	203.3667	2.3375	-
TOTAL	89	560.0556	-	-

*Significant at the .001 level

Regarding individual differences between the means for each age level, the Multiple Range Test of Least Significant Difference indicates that there is a significant difference between each pair of means at the .05 level.

Language Development (LD) Domain. Table 21 contains the results of a one-way analysis of variance of Language Development domain scores between and within nonhandicapped age levels (7^3-8^2 , 9^3-10^2 , 11^3-12^2).

Regarding individual differences between the means for each age level, the Multiple Range Test of Least Significant Difference indicates that there is a significant difference between each pair of means at the .05 level (see Table 17).

Table 21. ANOVA Results of Language Development Domain Scores Between and Within Nonhandicapped Age Levels (7^3-8^2 , 9^3-10^2 , 11^3-12^2)

Source	df	SS	MS	F
Between Groups	2	2148.8222	1074.4111	164.162*
Within Groups	87	569.4000	6.5448	-
TOTAL	89	2718.222	-	-

*Significant at the .001 level.

Number and Time (NT) Domain. Table 22 contains the results of a one-way analysis of variance of Number and Time domain scores between and within different nonhandicapped age levels (7^3-8^2 , 9^3-10^2 , 11^3-12^2).

Table 22. ANOVA Results of Number and Time Domain Scores Between and Within Nonhandicapped Age Levels (7^3-8^2 , 9^3-10^2 , 11^3-12^2)

Source	df	SS	MS	F
Between Groups	2	416.4667	208.2333	148.942*
Within Groups	87	121.6333	1.3981	-
TOTAL	89	538.1000	-	-

*Significant at the .001 level.

Regarding individual differences between the means for each age level, the Multiple Range Test of Least Significant Difference indicates that there is a significant difference between each pair of means at the .05 level (see Table 17).

Vocational Activity (VA) Domain. Table 23 contains the results of a one-way analysis of variance of Vocational

ctivity domain scores between and within different age levels (7^3-8^2 , 9^3-10^2 , 11^3-12^2).

Table 23. ANOVA Results of Vocational Activity Domain Scores Between and Within Nonhandicapped Age Levels (7^3-8^2 , 9^3-10^2 , 11^3-12^2)

Source	df	SS	MS	F
Between Groups	2	30.0222	15.0111	4.039*
Within Groups	87	323.3667	3.7169	-
TOTAL	89	353.3889	-	-

*Significant at the .05 level.

Regarding individual differences between the means for each age subgroup, the Multiple Range Test of Least Significant Difference indicates that there is a significant difference between each pair of means at the .05 level except between the age levels 9^3-10^2 and 11^3-12^2 (see Table 17).

Self-Direction (SD) Domain. Table 24 contains the results of a one-way analysis of variance of Self-Direction domain scores between and within different nonhandicapped age levels (7^3-8^2 , 9^3-10^2 , 11^3-12^2). The F test is not significant.

Table 24. ANOVA Results of Self-Direction Domain Scores Between and Within Nonhandicapped Age Levels (7^3-8^2 , 9^3-10^2 , 11^3-12^2)

Source	df	SS	MS	F
Between Groups	2	62.4889	31.2444	2.355*
Within Groups	87	1154.4000	13.2690	-
TOTAL	89	1216.8889	-	-

*Significant at the .1009 level.

Responsibility (R) Domain. Table 25 contains the results of a one-way analysis of variance of Responsibility domain scores between and within different nonhandicapped age levels (7^3-8^2 , 9^3-10^2 , 11^3-12^2). The F test is not significant.

Table 25. ANOVA Results of Responsibility Domain Scores Between and Within Nonhandicapped Age Levels (7^3-8^2 , 9^3-10^2 , 11^3-12^2)

Source	df	SS	MS	F
Between Groups	2	2.4889	1.2444	.499*
Within Groups	87	241.3000	2.7736	-
TOTAL	89	243.7889	-	-

*Significant at the .6339 level.

Socialization (S) Domain. Table 26 contains the results of a one-way analysis of variance of Socialization domain scores between and within different nonhandicapped age levels (7^3-8^2 , 9^3-10^2 , 11^3-12^2).

Table 26. ANOVA Results of Socialization Domain Scores
Between and Within Nonhandicapped Age Levels
(7³-8², 9³-10², 11³-12²)

Source	df	SS	MS	F
Between Groups	2	57.2222	28.6111	3.948*
Within Groups	87	639.4333	7.2464	-
TOTAL	89	687.6556	-	-

*Significant at the .05 level.

Regarding individual differences between the means for each age level, the Multiple Range Test of Least Significant Difference indicates that there is a significant difference between each pair of means at the .05 level except between the age levels 9³-10² and 11³-12².

Conclusion. The results of the analysis of variance and Multiple Range Test of Least Significant Difference of each domain indicate that four F values are significant at the .001 level and two F values are significant at the .05 level for the age levels 7³-8², 9³-10², and 11³-12². Independent Functioning, Economic Activity, Language Development, and Number and Time domain scores are highly significant. The least significant difference values for these domains indicate that they are significant at the .05 level. Only three domains (Physical Development, Self-Direction, and Responsibility) have nonsignificant differences. These findings indicate that, for six out of nine domains, the Jordanian form of the AAMD-ABS, Public School Version, Part I, has a

concurrent validity in terms of its ability to discriminate among the age levels 7^3-8^2 , 9^3-10^2 , and 11^3-12^2 where the means for the upper age group (11^3-12^2) are higher than those for the lower and middle age groups (7^3-8^2 and 9^3-10^2) and the means for the middle age group (9^3-10^2) are higher than those for the lower age group (7^3-8^2) (see Table 17).

The Reliability of the Jordanian ABS

The rater agreement procedure was used to estimate the reliability of the Jordanian ABS. Pearson Product-Moment Correlation Coefficients were used to study the assessments of the severely retarded group. Table 27 summarizes the results of the reliability study.

Table 27. Pearson Product-Moment Correlation Coefficients of Domain Scores (N=30)

Domain	r
Independent Functioning	.8775
Physical Development	.9110
Economic Activity	.6011
Language Development	.6432
Numbers and Time	.5995
Vocational Activity	.4574
Self-Direction	.4402
Responsibility	.5933
Socialization	.3756

Conclusion. The results of the reliability study show that while some domain scores have high reliability, others have low reliability. These findings are discussed in Chapter V.

The Rating Confidence Level of the Jordanian ABS

To determine how teachers felt about their ability to rate each student using the Jordanian ABS, the researcher analyzed three possible teacher responses to each item ("sure," "guess," and "no judgement") (see Appendix E and pp. 68-69). Completed scales for five subjects were selected at random from each of the subgroups. If four out of five ratings for an item were in agreement, then the item was considered to be in a category on which teachers agreed. That is, if four out of five teachers were "sure" of their response, the item was considered to be at the "sure" confidence level.

Table 28 presents the results of this categorization of items. Using the first row in the table as an example, the table can be interpreted as follows: 50 items were rated "sure" in four out of five protocols for the educable/mildly retarded, 4 items were rated "guess" in four out of five protocols, and this level of agreement was not reached for 2 items. There is no column for the "no judgement" rating since this response never occurred as often as four out of five times.

The results of the rating confidence level analysis for the educable/mildly retarded and the severely retarded groups indicate that the teachers of the mentally retarded children had "sure" responses on approximately 51 items (91 percent)

on the Jordanian ABS and "guess" responses on approximately 3 items (5 percent). This indicates that the teachers of mentally retarded children were very familiar with the characteristics of the children they worked with and were able to provide the information requested on the Jordanian ABS.

Table 28. Number of Items Responded to Four out of Five Times (79 percent) at Two Confidence Levels for Different Functioning and Age Levels (N=56)

Group	Confidence Levels		Less than Four out of Five Teachers Agreed
	Sure	Guess	
Educable/Mildly Retarded	50	4	2
Severely Retarded	52	3	1
Nonhandicapped:			
7 ³ -8 ²	43	10	3
9 ³ -10 ²	39	9	8
11 ³ -12 ²	40	12	4

On the other hand, the teachers of nonhandicapped children had "sure" responses on approximately 40 items (71 percent) and "guess" responses on approximately 10 items (17 percent).

A Comparison of Jordanian and U.S. Scores

A "t" test procedure was used to compare the domain scores from the Jordanian study with those from a U.S. study by Lambert, Windmiller, Cole, and Figueroa (1975). The

scores were taken from the AAMD Adaptive Behavior Scale Manual, Public School Version, 1974 Revision. Tables 29-32 present the results of the comparison.

Educable/Mildly Retarded Group

Table 29 shows the "t" test results from comparing the educable/mildly retarded groups in Jordan and the United States.

Table 29. "t" Test Results of Jordanian and U.S. Scores for the Educable/Mildly Retarded Groups (Age 11³-12²)

Domain	Jordan (N=30)		United States (N=204)		"t"
	M	SD	M	SD	
Independent Functioning	45.9000	9.7179	66.73	8.88	12.20*
Physical Development	21.6667	2.9866	22.42	2.13	1.724
Economic Activity	5.2667	2.1162	7.52	2.90	4.095*
Language Development	19.2333	5.1171	29.48	5.15	10.18*
Number and Time	4.9333	2.7029	9.12	2.14	9.66*
Vocational Activity	6.5000	2.1270	6.96	3.76	0.512
Self-Direction	9.8000	3.9252	13.60	4.00	4.87*
Responsibility	3.2000	1.6274	3.79	1.24	2.33*
Socialization	14.5333	3.9717	18.70	4.06	5.263*

*Significant at the .05 level.

Seven of the nine U.S. domain scores are significantly higher than those obtained in the Jordanian sample. The means for the remaining domains are lower but not significantly different.

Nonhandicapped Group

Age Level 7³-8². Table 30 presents the results of the comparison of the Jordanian and U.S. nonhandicapped scores for the age level 7³-8².

Table 30. "t" Test Results of Jordanian and U.S. Scores for the Nonhandicapped Group (Age 7³-8²)

Domain	Jordan (N=30)		United States (N=204)		"t"
	M	SD	M	SD	
Independent Functioning	58.5000	4.1168	67.80	9.23	5.409*
Physical Development	23.9667	.1826	23.03	1.77	-2.890
Economic Activity	7.2000	1.8270	7.08	2.64	-0.238
Language Development	25.7667	3.0703	33.03	4.82	7.953*
Number and Time	6.8000	.9965	9.87	1.84	8.883*
Vocational Activity	7.8000	2.1399	6.83	4.39	-1.182
Self-Direction	12.7333	4.6678	15.41	3.81	3.405*
Responsibility	4.6333	2.3413	4.22	1.26	-1.402
Socialization	18.5667	3.1914	21.40	3.66	3.964*

*Significant at the .05 level.

The means for five of the nine U.S. domain scores are significantly higher than those for the Jordanian scores. The means for the remaining domain scores are not significantly different.

Age Level 9³-10². Table 31 presents the results of the comparison of the Jordanian and U.S. nonhandicapped scores for the age level 9³-10².

Table 31. "t" Test Results of Jordanian and U.S. Scores for the Nonhandicapped Group (Age 9³-10²)

Domain	Jordan (N=30)		United States (N=204)		"t"
	M	SD	M	SD	
Independent Functioning	67.6000	4.0563	72.40	8.28	3.123*
Physical Development	24.0000	0	23.41	1.38	-2.337
Economic Activity	9.9000	1.5391	9.99	2.78	0.174
Language Development	64.8333	2.4366	35.18	4.47	0.420
Number and Time	10.6667	1.7287	11.03	1.49	1.232
Vocational Activity	9.1000	1.9001	8.65	3.11	-0.773
Self-Direction	14.6667	3.2306	16.25	3.39	2.429*
Responsibility	4.7667	1.1651	4.52	1.24	-1.004
Socialization	20.4000	2.7493	21.99	3.68	2.284*

*Significant at the .05 level.

The means for three of the nine U.S. domain scores are significantly higher than those for the Jordanian scores. The means for the remaining domains are not significantly different.

Age Level 11³-12². Table 32 presents the results of the comparison of Jordanian and U.S. scores for the nonhandicapped age level 11³-12².

The means for three of the nine U.S. scores are significantly different from those obtained in the Jordanian sample. The remaining means are not significantly different.

Table 32. "t" Test Results of Jordanian and U.S. Scores
for the Nonhandicapped Group (Age 11³-12²)

Domain	Jordan		United States		"t"
	M	SD	M	SD	
Independent Functioning	74.83	2.52	77.82	7.61	2.134*
Physical Development	24.00	0	23.63	.95	-2.13
Economic Activity	12.06	1.14	12.27	3.83	0.401
Language Development	37.43	1.135	36.37	3.89	-1.482
Number and Time	11.83	.461	11.59	1.01	-1.282
Vocational Activity	8.70	1.88	8.83	3.25	0.297
Self-Direction	13.97	3.00	16.63	3.83	3.663*
Responsibility	4.20	1.30	4.65	1.32	1.763
Socialization	19.70	2.29	22.34	3.47	4.054*

*Significant at the .05 level.

It should be noted that the Jordanian sample of nonhandicapped students included only males, while the U.S. study included both males and females. Therefore, the findings of any comparison between the two studies should be interpreted with much caution. Future studies should take this limitation into consideration.

CHAPTER V

SUMMARY, DISCUSSION, AND RECOMMENDATIONS FOR FUTURE RESEARCH

Summary

Purpose of the Study

The main purpose of the study was to develop a Jordanian adaptation of the American Association on Mental Deficiency Adaptive Behavior Scale (AAMD-ABS), Public School Version, Part I. The specific objectives of the study were

- To translate the AAMD-ABS, public School Version, Part I, from English to Arabic.
- To administer the Arabic form to a sample of Jordanian children. The sample included educable/mildly mentally retarded (EMR), severely mentally retarded (SMR), and nonhandicapped children representing the age levels 7^3-8^2 , 9^3-10^2 , and 11^3-12^2 .*
- To evaluate the Jordanian form's ability to discriminate between age levels and between nonhandicapped and mentally retarded children.
- To compare the Jordanian scores with U.S. scores in order to evaluate the pattern of the Jordanian domain scores.

* 7^3 = 7 years, 3 months; 8^2 = 8 years, 2 months; etc.

Review of Literature

The review of literature discussed the importance of adaptive behavior and related research, the rationale for selecting the AAMD-ABS for the study, the criticisms that have been directed against adaptive behavior and adaptive behavior scales, and procedures for translating materials for use in other cultures.

The concept of adaptive behavior has come to be recognized as an important dimension in assessing mental retardation. This is evidenced by (1) the AAMD's decision to include the concept of adaptive behavior as part of its definition of mental retardation, (2) the number of adaptive behavior scales that have been developed in the past 30 years, (3) the many efforts to adapt or standardize the AAMD-ABS for use in other countries, and (4) the numerous research efforts on the concept of adaptive behavior and the use of adaptive behavior scales.

The researcher chose to adapt the AAMD-ABS because (1) the AAMD-ABS is more comprehensive and exhaustive than other adaptive behavior scales, (2) the AAMD-ABS can be used in program planning as well as for diagnosing and placing individuals, (3) the AAMD-ABS discriminates between behavior levels more effectively than IQ assessments, (4) the AAMD-ABS can be used to develop rehabilitation programs, and (5) the AAMD-ABS has proven to be an effective means of diagnosing

and placing mentally retarded individuals. The researcher adapted only Part I of the AAMD-ABS because (1) it has a higher reliability than Part II and (2) the authors of the AAMD-ABS plan to revise Part II.

Questions about the role of language appear in all cross-cultural research, particularly when researchers try to translate their materials from one language to another. Among the areas that need to be considered in developing equivalent translations in cross-cultural research are (1) vocabulary equivalence, (2) idiomatic equivalence, (3) grammatical-syntactical equivalence, (4) experiential equivalence, and (5) conceptual equivalence. Of the four major approaches to the translation process (direct translation, pretest, centering, and back-translation), research has indicated that back-translation is the most desirable process for translating an instrument such as the AAMD-ABS. Four criteria can be applied to using the back-translation process: (1) the meaning criterion, (2) the bodily movement performance criterion, (3) the similar response criterion, and (4) the questionnaire criterion.

Research Design and Methodology

The following procedures were used to accomplish the objectives of the study:

- (1) The researcher translated the AAMD-ABS, Public School Version, Part I, from English to

Arabic. Two native Arabic speakers who were not familiar with the English version then did two back-translations from Arabic to English. Comments by Jordanian graduate students at Michigan State University and faculty members at Jordan University were used to evaluate the translation and develop the final Arabic version of the AAMD-ABS.

(2) The Jordanian form was administered to a Jordanian sample of 150 nonhandicapped, educable/mildly mentally retarded, and severely mentally retarded children representing the age levels 7^3-8^2 , 9^3-10^2 , and 11^3-12^2 .

(3) Analysis of variance, the Multiple Range Test of Least Significant Difference, the "t" test, and an analysis of teachers' responses to each item were used to analyze the data.

Findings

The findings of the study can be summarized as follows:

(1) The Jordanian ABS has a concurrent validity in terms of its ability to discriminate among functioning levels (nonhandicapped, educable/mildly retarded, and severely retarded) and among age levels (7^3-8^2 , 9^3-10^2 , and 11^3-12^2).

(2) The reliability of the Jordanian scores ranges from .9110 to .3756.

(3) The means for some Jordanian domain scores are significantly different when compared with the means for U.S. scores:

- Educable/Mildly Retarded. The U.S. means for seven of the nine domain scores (Independent Functioning,

Economic Activity, Language Development, Number and Time, Self-Direction, Responsibility, and Socialization) are significantly higher than the Jordanian means. The means for the remaining domain scores (Physical Activity and Vocational Activity) are lower but not significantly different.

- Nonhandicapped, Age Level 7³-8². The U.S. means for five of the nine domain scores (Independent Functioning, Language Development, Number and Time, Self-Direction, and Socialization) are significantly higher than the Jordanian means. The means for the remaining domains (Physical Development, Economic Activity, Vocational Activity, and Responsibility) are not significantly different.
- Nonhandicapped, Age Level 9³-10². The U.S. means for three of the nine domain scores (Independent Functioning, Self-Direction, and Socialization) are significantly higher than those obtained in the Jordanian sample. The means for the remaining domain scores (Physical Development, Economic Activity, Language Development, Number and Time, Vocational Activity, and Responsibility) are not significantly different.
- Nonhandicapped, Age Level 11³-12². The U.S. means for three of the nine domain scores (Independent Functioning, Self-Direction, and Socialization) are significantly different from those obtained in the Jordanian sample. The means for the remaining domain

scores (Physical Development, Economic Activity, Language Development, Number and Time, Vocational Activity, and Responsibility) are not significantly different.

(4) Teachers of mentally retarded children in Jordan were much more certain of their responses to most of the statements on the Jordanian ABS than were teachers of nonhandicapped children.

Discussion

The Concurrent Validity of the Jordanian ABS

Discriminating Among Educable/Mildly Retarded, Severely Retarded, and Nonhandicapped Groups. The results of the analysis of variance and the Multiple Range Test of Least Significant Difference indicate that the F values are significant at the .001 level and that all of the least significant difference values are significant at the .05 level for each group level. Therefore, the Jordanian form of the AAMD-ABS, Public School Version, Part I, has concurrent validity in terms of its ability to discriminate among educable/mildly retarded, severely retarded, and nonhandicapped children.

The findings of the Jordanian study are similar to those reported for other studies. In a U.S. study, Lambert, Windmiller, Cole, and Figueroa (1975) found that the AAMD-ABS, Public School Version, Part I, has "significant" levels ($p < .001$) of correlation of class placement (comparing the

educable/mildly retarded and regular subjects) with domain scores, when there were controls for either status or sex (p. 40). In a Puerto Rican study, Reyes (1978) also found that the Spanish version of the AAMD-ABS could significantly discriminate among IQ levels ($p < .001$). In this study, the Spanish version demonstrated a highly significant effect of measured intelligence over adaptive behavior performance for Part I of the Spanish scale ($p < .001$) (p. 101).

Discriminating Among Age Levels. The results of the analysis of variance and the Multiple Range Test of Least Significant Difference indicate that four F values are significant at the .001 level (Independent Functioning, Economic Activity, Language Development, and Number and Time) and two F values are significant at the .05 level (Vocational Activity and Socialization) for the age levels 7^3-8^2 , 9^3-10^2 , and 11^3-12^2 . Three domains (Physical Development, Self-Direction, and Responsibility) have values that are not significant. Therefore, the Jordanian form of the AAMD-ABS, Public School Version, Part I, has a concurrent validity for six out of nine domains in terms of its ability to discriminate among the age levels 7^3-8^2 , 9^3-10^2 , and 11^3-12^2 .

The findings of the Jordanian study with respect to age levels are similar to those reported by other studies. In their U.S. study to standardize the AAMD-ABS, Public School Version, Lambert, Windmiller, Cole, and Figueroa

(1975) found significant levels ($p < .001$) of correlation of class placement regarding the various age levels 7^3-8^2 , 8^3-9^2 , 9^3-10^2 , and 11^3-12^2 (pp. 40-47).

The lack of significantly different F values among the age levels for three of the nine domains (Physical Development, Self-Direction, and Responsibility) might be explained as follows:

(1) Physical Development. The lack of a significant difference among the scores for different age levels might be a result of the fact that, by age 7, all nonhandicapped students have developed sufficient skills (i.e., vision, hearing, body balance, walking, running, hand and limb control) in the Physical Development Domain. Thus, they would be mature in these areas at all of the age levels.

In their report on the U.S. study, Lambert, Windmiller, Cole, and Figueroa (1975) indicated that

for school-age children, raw scores of 20 or higher usually mean a normal to perfect range of physical development. Approximately 90 percent of regular class and 70 percent of educable mentally retarded children in the standardization group fall into this category (p. 8).

Reyes (1978) also had findings similar to those of the Jordanian study. In the Puerto Rico study, scores for the sensory development subdomain were not significantly different among measured intelligence levels. Reyes concluded that the effect of age on scores for the Physical Development Domain was not significant (p. 95).

(2) Self-Direction and Responsibility. The lack of significant differences among age levels for these domains might be because these age levels represent nonhandicapped students at governmental schools. The classroom activities of elementary schools in Jordan may not emphasize the characteristics included in these domains (e.g., Self-Direction—initiative, passivity, persistence, and leisure time; Responsibility—personal belongings and general responsibility). Also, teachers may not be as familiar with or as interested in these aspects. Encouraging students in the areas covered by the Self-Direction and Responsibility Domains appears to be a strength that is emphasized in the United States more than in Jordan.

The Reliability of the Jordanian ABS

The rater agreement procedure was used to estimate the reliability of domains in the Jordanian ABS. The range for all reliability scores is .9110 to .3756. Two of the nine domains [Independent Functioning ($r = .8775$) and Physical Development ($r = .911$)] have high correlation coefficients; four of the nine domains [Economic Activity ($r = .6011$), Language Development ($r = .6432$), Number and Time ($r = .5995$), and Responsibility ($r = .5933$)] have moderate correlation coefficients; and three of the nine domains (Vocational Activity ($r = .4575$), Self-Direction ($r = .4402$), and Socialization ($r = .3756$)) have low correlation coefficients.

These findings are similar to those reported by other studies. Nihira (1969) reported that the reliability of

domain scores for Part I of the AAMD-ABS ranges from .89 to .35 when the interrater reliability procedure is used. Upadhyaya (1974) found that the reliability of the Indian ABS, Part I, ranges from between .78 and .61. Reyes (1978) found that the reliability of the Puerto Rico ABS, Part I, ranges from .89 to .68 using the test-retest procedure and from .10 to .81 using the interrater procedure. The 1975 AAMD-ABS manual reports that the reliability for Part I ranges from .93 to .71 (Nihira et al., p. 46). Isett and Spreat (1979) found that the reliability of Part I ranges from .90 to .43.

The above ranges show that the reliability of Part I differs from one domain to another and from one setting to another. These findings, which are inconsistent with those from the Jordanian study, may be summarized as follows:

(1) High Reliability Domains ($r > .80$).

Nihira (1969) indicated a high reliability for the Independent Functioning ($r = .85$), Language Development ($r = .86$), and Vocational Activity ($r = .89$) Domains. Reyes (1978) found that, in Puerto Rico, the Independent Functioning ($r = .81$), Physical Development ($r = .88$), Economic Activity ($r = .88$), Language Development ($r = .86$), Number and Time ($r = .86$), Vocational Activity ($r = .89$), and Responsibility ($r = .92$) domains have high reliability. The 1975 AAMD-ABS manual indicates that Independent Functioning ($r = .92$), Physical Development ($r = .93$), Economic Activity ($r = .85$), Language Development ($r = .87$), Number and Time ($r = .86$), and

Responsibility ($r = .877$) have high reliability. In the Jordanian study, only the Independent Functioning ($r = .877$) and Physical Development Domains ($r = .91$) fall into the high reliability category.

(2) Moderate Reliability Domains ($r \leq .80$ and $> .60$). Nihira (1969) found that the Physical Development ($r = .76$) and Socialization ($r = .73$) Domains have moderate reliability. Reyes (1978) found that the Self-Direction ($r = .68$) and Socialization ($r = .75$) Domains have moderate reliability. The AAMD-ABS manual indicated that the Vocational Activity ($r = .78$), Self-Direction ($r = .71$), and Socialization ($r = .77$) Domains have moderate reliability. In the Jordanian study, the Economic Activity ($r = .60$), Language Development ($r = .64$), and Number and Time ($r = .5995$) Domains have moderate reliability.

(3) Low Reliability Domains ($r < .60$). Nihira (1969) indicated that the Economic Activity ($r = .35$), Number and Time ($r = .54$), Self-Direction ($r = .42$), and Responsibility ($r = .50$) Domains have low reliability. In the Jordanian study, the Vocational Activity ($r = .45$), Self-Direction ($r = .44$), and Socialization ($r = .375$) Domains have low reliability.

The low reliability of the Vocational Activity, Self-Direction, and Socialization Domains in the Jordanian study might be due to the following reasons:

(1) Some of the raters may not have been totally familiar with the characteristics of severely mentally retarded children. After the

first assessment of severely retarded children had been completed, the researcher asked the directors of the Special Education Centers to select additional teachers who were familiar with the same group of severely mentally retarded children. These teachers may not have been as familiar with the characteristics of the severely retarded children as were the teachers in the first assessment. (The first assessment was used to investigate the Jordanian form's ability to discriminate between nonhandicapped, educable/mildly retarded, and severely retarded children.)

(2) The subdomains of the Vocational Activity, Self-Direction, and Socialization Domains may not have been as obvious to the raters as were the subdomains of the other domains. The Special Education Centers may have placed more emphasis on the characteristics in the Independent Functioning, Physical Development, Economic Activity, Language Development, Number and Time, and Responsibility Domains than on the characteristics in the Vocational Activity, Self-Direction, and Socialization Domains.

The Rating Confidence Level of the Jordanian ABS

Using a sample of the teachers' responses to items on the Jordanian ABS, the researcher analyzed the extent to which teachers felt confident in responding to each item. The teachers of mentally retarded children indicated that they were "sure" of their responses on about 91 percent (51 of 56) of the items, and that their responses were a "guess" on about 5 percent (3 of 56) of the items. The teachers'

responses to the remaining four items were varied but did not meet the 79 percent agreement criterion set by the researcher. None of the teachers of mentally retarded children indicated that they had "no judgement" on any of the items.

The teachers of the nonhandicapped students indicated that they were "sure" on about 71 percent (40 of 56) of the items on the Jordanian form, and that their responses were a "guess" on about 17 percent (10 of 56) of the items. Their responses on the remaining 6 items were varied and did not meet the 79 percent agreement criterion level. None of the teachers of nonhandicapped students indicated that they had "no judgement" on any of the items.

This analysis demonstrates that even though some of the items on the Jordanian ABS are inappropriate to the Jordanian culture, teachers were confident of their ability to respond to the majority of questions. These findings are similar to the results of other studies. Lambert, Windmiller, Cole, and Figueroa (1975) indicated that in the United States

nearly all of the items of the ABS, Part I, (with the exception of a few individual items and the entire set of items of the Domestic Activity Domain) are appropriate to the school setting and it is possible for teachers to rate [their students] (p. 40).

In reporting on the results of the Puerto Rican study, Reyes (1978) commented, "the Spanish version of the ABS has

proved to be usable with the indigenous Spanish-speaking population in Puerto Rico" (p. 104).

The difference in number and percentage of "sure" and "guess" responses between teachers of mentally retarded children and teachers of nonhandicapped children has several possible explanations:

(1) Teachers of mentally retarded children spend more time with each child than do teachers of nonhandicapped children. The average class size for mentally retarded children is about 15 students, while the average class size for nonhandicapped students is about 40 students.

(2) Different curricula are provided for nonhandicapped and mentally retarded students.

(3) Items on the Jordanian ABS are more appropriate for mentally retarded children than for nonhandicapped children.

A Comparison of Jordanian and U.S. Scores

The researcher compared the findings from the Jordanian study with data from a previous U.S. study (Lambert, Windmiller, Cole, and Figueroa, 1975). Because comparable data were not available for all of the groups in the Jordanian sample, the researcher only compared the data for the educable/mildly retarded and the nonhandicapped groups (age levels 7^3-8^2 , 9^3-10^2 , and 11^3-12^2) in the two countries.

Educable/Mildly Retarded Groups. In comparing the scores of the educable/mildly retarded groups, the researcher found that the means for the U.S. scores are significantly different than the means for the Jordanian scores in seven of the nine domains (Independent Functioning, Economic Activity, Language Development, Number and Time, Self-Direction, Responsibility, and Socialization). The means for the remaining domain scores (Physical Development and Vocational Activity) are lower but not significantly different.

These findings are consistent with those of other studies. In comparing the findings from the Puerto Rican study with those from a 1969 U.S. study, Reyes noted that "the Spanish sample scored consistently lower than the 1969 ABS sample in all Domains and for all measured intelligence levels studied" (p. 96). The author concluded that the Puerto Rican and U.S. studies "did not follow the same development trends" and that this could be due to different sample sizes, cultural practices, procedures for institutionalizing the mentally retarded, and views concerning the medical model of retardation (p. 103).

The significant differences between the Jordanian and U.S. samples regarding the Independent Functioning, Economic Activity, Language Development, and Socialization Domains might be explained by the advanced state of U.S. programs for the mentally retarded (and for handicapped persons in general).

Programs for handicapped students in Jordan are less sophisticated than are those offered to students in the United States.

The lack of significant differences between the Physical Development and Vocational Activity domain scores of Jordanian and U.S. educable/mildly retarded might be explained as follows:

(1) Physical Development Domain. Educable/mildly retarded students at this age level (11^3-12^2) may be sufficiently mature in all of the various skills of the Physical Development Domain (i.e., vision, hearing, body balance, walking, running, hands and limb control). This finding is consistent with that reported by Lambert, Windmiller, Cole, and Figueroa (1975). They suggested that 70 percent of the educable/mildly retarded group had a raw score of 20 on the Physical Development Domain. This score was in the normal to above normal range of the domain.

(2) Vocational Activity Domain. The scores of students in the United States and Jordan are more similar in the area of Vocational Activity (i.e., job complexity, job performance, and work habits) than in other areas. This may be because programs for mentally retarded children in Jordan emphasize vocational skills training in their workshops and sheltered workshops.

Nonhandicapped Group. In comparing the scores of the nonhandicapped groups for the 7^3-8^2 age level, the researcher found that the means for the U.S. scores were significantly

different than the means for the Jordanian scores in five of the nine domains (Independent Functioning, Language Development, Number and Time, Self-Direction, and Socialization). The means for the remaining domains (Physical Development, Economic Activity, and Vocational Activity) are not significantly different.

In comparing the scores of the nonhandicapped groups for the age levels 9^3-10^2 and 11^3-12^2 , the researcher found that the results were the same for both age levels. The means for U.S. scores on three of the nine domains (Independent Functioning, Self-Direction, and Socialization) are significantly different from those obtained in the Jordanian sample. The means for the remaining domains (Physical Development, Economic Activity, Language Development, Number and Time, Vocational Activity, and Responsibility) are not significantly different.

The significant differences between the Jordanian and U.S. studies regarding the Independent Functioning, Self-Direction, and Socialization Domains are supported by other studies, particularly those that emphasize cultural differences between the United States and countries such as India, Belgium, and Egypt.

(1) Independent Functioning Domain. Upadhyaya (1977) found that many of the skills in the Independent Functioning Domain (i.e., using table utensils, eating in public, using table manners, choice of clothing, using public transportation, and using the telephone) reflect the cultural

differences between India and the United States. The author noted, for example, that

(1) usually eating is done with the help of fingers, with occasional use of a spoon. Use of knife and fork is either absent or limited to restaurants and Westernized homes, (2) eating in public is encouraged less...(p 186).

Magerotte (1977) commented on some of the cultural differences between the United States and Belgium: "Behaviors such as brushing teeth, using public transportation, were evaluated with difficulty, insofar as they did not match traditional school activities" (p. 192). Reporting on the Egyptian study, El-Ghatit (1974) indicated that "some items of the ABS were not culturally appropriate" for Egyptian society (p. 4).

(2) Socialization and Self-Direction Domains. The significant differences between the Jordanian and U.S. scores on the Socialization Domain (i.e., cooperation, consideration for others, awareness of others, interaction with others, participation in group activities, selfishness, and social maturity) and the Self-Direction Domain (i.e., initiative, passivity, attention, persistence, and leisure time) may reflect the differences between the two cultures. The findings of the Jordanian study are similar to those reported by Upadhyaya (1977) who indicated that the Indian culture has

different expectations from boys, girls, and women. Boys and girls of school or college age are expected to concentrate on their studies and not bother about other things.... For some functions, such as money handling, budgeting money, and

making purchases, children usually depend on their parents. Making use of bank facilities, using telephones, consulting with a doctor for medical care, etc., are considered to be an adult's job (p. 186).

The differences between the Jordanian and the U.S. scores might be explained as follows:

- The U.S. and Jordanian cultures are very different. Many aspects of the Socialization and Self-Direction Domains are emphasized more in the United States than in Jordan.
- Teachers of nonhandicapped children in Jordan may be unfamiliar with certain aspects of the Socialization and Self-Direction Domains.
- The skills included in the Socialization and Self-Direction Domains may not be emphasized in elementary classrooms in Jordan.

(2) Language Development and Number and Time Domains. The significant differences between the U.S. and Jordanian scores on the Language Development Domain (i.e., writing, sentences, word usage, reading, and complex instructions) and the Number and Time Domain (i.e., numbers, time, and time concepts) might be explained by the following:

- Jordanian students at the age level 7^3-8^2 have just started school. Skills in the Language Development and Number and Time Domains are just beginning to be taught. Most of the students have not attended nursery school, kindergarten, or preschool and so have not been introduced to many of the aspects of these two domains.

- Television programs for children in Jordan are limited to about five hours a week. Jordanian children, therefore, have much less exposure to television programs that could introduce them to these concepts.

The nonsignificant differences between the domain scores for the Jordanian and U.S. handicapped groups might be explained as follows:

(1) Physical Development Domain. The nonhandicapped students in both cultures may have developed sufficient skills in the Physical Development Domain by age 7. This finding would be consistent with the results of the U.S. study. Lambert, Windmiller, Cole, and Figueroa (1975) indicated that "90 percent of nonhandicapped school-age children show normal-to-perfect range of physical development" (p. 8).

(2) Economic Activity and Vocational Activity Domains. The lack of significant differences in the Economic Activity Domain (i.e., money handling and budgeting and shopping skills) and the Vocational Activity Domain (i.e., job complexity, job performance, and work habits) might be explained by the fact that the nonhandicapped students in both cultures have developed sufficient skills in the various aspects of these domains.

(3) Language Development, Number and Time, and Responsibility Domains. The lack of significant differences in the Language Development Domain (i.e., writing, verbal expression, articulation, sentences, word usage, reading, complex instructions, and conservation); the Number and Time Domain (i.e., numbers, time, and time concept) and the

Responsibility Domain (personal belongings and general responsibility) for the nonhandicapped groups in the age levels 9³-10² and 11³-12² may be because nonhandicapped students in academic programs in both cultures have developed sufficient skills in the various aspects of these domains.

The general trend in all of the data is for the scores of Jordanian students to be lower than the scores of U.S. students. This may be due to a variety of reasons including (1) cultural differences, (2) differences in educational programs and educational philosophy, (3) differences in teachers' understanding of the concept of adaptive behavior, (4) the all-male composition of the Jordanian sample of nonhandicapped students as compared with the male and female composition of the U.S. sample, and (5) Jordanian professionals' inability to diagnose different levels of mental retardation. Professionals in Jordan do not have the diagnostic instruments or experience needed to diagnose handicapped children as carefully as is done in the United States. It is possible that mentally retarded children in Jordan are mislabelled in terms of the degree or severity of their retardation.

Recommendations for Future Research

Based on the findings of the present study, the researcher has developed the following recommendations for future research:

Recommendation 1. There should be continued development of a Jordanian version of the AAMD-ABS, Public School Version, Part I. The current version should be revised to include only items that are appropriate for the Jordanian culture. In particular, the following items should be modified:

- Item 1 Use of Table Utensils
 (Statements 1, 2, 3, and 4)
- Item 2 Eating in Public
 (Statements 2 and 3)
- Item 4 Table Manners
 (Statement 4)
- Item 10 Clothing
 (Statements 4, 5, and 6)
- Item 15 Public Transportation
 (Statement 1)
- Item 17 Other Independent Functioning
 (Statement 5)
- Item 24 Money Handling
 (Statement 1)
- Item 25 Budgeting
 (Statements 3 and 4)
- Item 27 Purchasing
 (Statements 1, 2, 3, 4, and 5)
- Item 36 Miscellaneous Language Development
 (Statement 6)
- Item 47 Leisure Time Activity
 (Statement 1)

Most of the items (45 of 56) seem to be useful, though the items mentioned above (11 of 56) need more revision and refinement in order to make certain that a future version of the Jordanian ABS is appropriate to the Jordanian culture. The problematic items are the same as those identified earlier (see pp. 55-65).

The new form should be standardized on a larger sample of Jordanian mentally retarded children. This sample should include educable/mildly retarded, trainable retarded, and severely retarded children. The results of the development and standardization process should provide the data needed to determine the reliability, validity, and local norms for a final form of the Jordanian ABS.

Recommendation 2. More than one procedure should be used to determine the reliability of a new version of the Jordanian ABS. Future adaptation or standardization studies should consider using the interrater, rater agreement, and test-retest procedures with more than one group (e.g., educable/mildly retarded, trainable retarded, and severely retarded children).

Recommendation 3. Some attempt should be made to study the predictive validity of a new form of the Jordanian ABS. This might be accomplished by comparing the results of the Jordanian ABS with those of IQ tests such as the Stanford-Binet and the Wechsler Intelligence Scale for Children. Predictive validity might also be determined by conducting a follow-up study that would compare the results of the Jordanian ABS with future academic or vocational performance.

Recommendation 4. Future adaptation and/or standardization studies of the AAMD-ABS, or any other adaptive behavior scale, should consider including the parents as

source of information for some of the items.

Recommendation 5. Future adaptation and/or standardization studies of the AAMD-ABS, or other adaptive behavior scales, should include both male and female nonhandicapped students.

The development and standardization of a new Jordanian ABS can make a major contribution to the creation of effective methods for diagnosing, placing, and educating mentally retarded children in Jordan.

APPENDICES

APPENDIX A

Criterion of Back-Translation Procedure Form

APPENDIX A

Criterion of Back-Translation Procedure Form

Introduction

The American Association on Mental Deficiency (AAMD), Adaptive Behavior Scale (ABS), Public School Version, Part I, has been translated into the Arabic language. Many procedures might be used to ensure equivalent versions in the original and target languages. The back-translation procedure is one of these. In this procedure, a bilingual person has to translate from the original to the target language. The next step is to have another bilingual person, blindly, translate from the target language to the original language. Many criteria can be used to "test" the equivalence of the two versions. One of these criteria is known as the meaning criterion. The meaning criterion requires that a comparison be made of concepts of meaning in the original and back-translated versions. Three procedures can be used to evaluate this criterion:

1. Recording the level of meaning agreement (meaning or concept discrepancy) by monolingual raters.
2. Recording the level of meaning agreement (meaning or concept discrepancy) by bilingual raters.
3. Recording the level of meaning errors as major or minor errors.

Definitions

The following are definitions for the preceding terminology which might be useful in defining the above procedures:

- Concept:
1. "Something conceived in the mind, thought, notion."
 2. "An abstract idea generalized from a particular instance" (Webster's Dictionary).
- Discrepancy:
1. "The quality or state of being discrepant." Difference.
 2. "An instance of being discrepant; being at variance; disagreeing" (Webster's Dictionary).
- Major:
- "Greater in number, quantity or extent" (Webster's Dictionary).

Minor: "Inferior in importance, size, or degree. Comparatively unimportant" (Webster's Dictionary).

Instructions

You have two forms of the ABS: the Original Form and the Back-Translation/Target Form. Please circle the appropriate codes which apply for the instructions in the items of both forms. The following are the meanings of those codes:

- A. There is no discrepancy in meaning (concept) between the two versions in my opinion.
- B. There is a discrepancy in meaning (concept) between the two versions in my opinion.
- C. It is a major discrepancy in my opinion.
- D. It is a minor discrepancy in my opinion.
- E. The words/concepts which have major discrepancy are _____

_____.

Please indicate this in the proper place.

Rater's Sheet

Instructions, page 1:	A	B	C	D	E	_____
Instructions, pages 2 and 3:	A	B	C	D	E	_____
Item #1:	A	B	C	D	E	_____
Item #2:	A	B	C	D	E	_____
Item #3:	A	B	C	D	E	_____
Item #4:	A	B	C	D	E	_____
Item #5:	A	B	C	D	E	_____
Item #6:	A	B	C	D	E	_____
Item #7:	A	B	C	D	E	_____
Item #8:	A	B	C	D	E	_____
Item #9:	A	B	C	D	E	_____
Item #10:	A	B	C	D	E	_____

Item #11:	A	B	C	D	E	_____
Item #12:	A	B	C	D	E	_____
Item #13:	A	B	C	D	E	_____
Item #14:	A	B	C	D	E	_____
Item #15:	A	B	C	D	E	_____
Item #16:	A	B	C	D	E	_____
Item #17:	A	B	C	D	E	_____
Item #18:	A	B	C	D	E	_____
Item #19:	A	B	C	D	E	_____
Item #20:	A	B	C	D	E	_____
Item #21:	A	B	C	D	E	_____
Item #22:	A	B	C	D	E	_____
Item #23:	A	B	C	D	E	_____
Item #24:	A	B	C	D	E	_____
Item #25:	A	B	C	D	E	_____
Item #26:	A	B	C	D	E	_____
Item #27:	A	B	C	D	E	_____
Item #28:	A	B	C	D	E	_____
Item #29:	A	B	C	D	E	_____
Item #30:	A	B	C	D	E	_____
Item #31:	A	B	C	D	E	_____
Item #32:	A	B	C	D	E	_____
Item #33:	A	B	C	D	E	_____
Item #34:	A	B	C	D	E	_____
Item #35:	A	B	C	D	E	_____
Item #36:	A	B	C	D	E	_____
Item #37:	A	B	C	D	E	_____

Item #38:	A	B	C	D	E	_____
Item #39:	A	B	C	D	E	_____
Item #40:	A	B	C	D	E	_____
Item #41:	A	B	C	D	E	_____
Item #42:	A	B	C	D	E	_____
Item #43:	A	B	C	D	E	_____
Item #44:	A	B	C	D	E	_____
Item #45:	A	B	C	D	E	_____
Item #46:	A	B	C	D	E	_____
Item #47:	A	B	C	D	E	_____
Item #48:	A	B	C	D	E	_____
Item #49:	A	B	C	D	E	_____
Item #50:	A	B	C	D	E	_____
Item #51:	A	B	C	D	E	_____
Item #52:	A	B	C	D	E	_____
Item #53:	A	B	C	D	E	_____
Item #54:	A	B	C	D	E	_____
Item #55:	A	B	C	D	E	_____
Item #56:	A	B	C	D	E	_____
Item #57:	A	B	C	D	E	_____
Item #58:	A	B	C	D	E	_____
Item #59:	A	B	C	D	E	_____
Item #60:	A	B	C	D	E	_____
Item #61:	A	B	C	D	E	_____
Item #62:	A	B	C	D	E	_____
Item #63:	A	B	C	D	E	_____
Item #64:	A	B	C	D	E	_____

Item #65: A B C D E _____

Item #66: A B C D E _____

APPENDIX B

Summary Sheet of Back-Translation Results

APPENDIX B

Summary Sheet of Back-Translation Results

Rater No.	Translation Form			Recording Code			
				A	B*	C	D
1	A1	+	B1	56	1	0	11
2	A1	+	B1	46	0	3	18
3	A1	+	C2	39	13	4	10
4	A1	+	C2	35	33	21	19
5	A1	+	D3	51	1	0	6
6	A1	+	D3	50	8	2	5

A1 = Original English version of the AAMD-ABS; B1 = Back-translation by a faculty member at the University of Jordan; C2 = Back-translation by a post-graduate student at Michigan State University; D3 = Target language (Arabic) form prepared by the translator.

A = Number of items with meaning agreement; B = Number of items with meaning discrepancy; C = Number of items with major meaning discrepancies; and, D = Number of items with minor meaning discrepancies.

* It was found that the category "B" was a useless category. The desired input was already included in either "C" or "D".

APPENDIX C

Arabic Translation of the AAMD Adaptive Behavior Scale,
Public School Version, Part I, and Answer Sheet Booklet

APPENDIX C

Arabic Translation of the AAMD Adaptive Behavior Scale,
Public School Version, Part I, and Answer Sheet Booklet

Adaptive Behavior Scale

The University of Jordan
College of Education
Psychology Department

الجامعة الاردنية
كلية التربية / قسم علم النفس

The American Association
on Mental Deficiency (AAMD)

الجمعية الامريكية للتخلف العقلي

Adaptive Behavior Scale (ABS)

مقياس السلوك التكيفي

Public School Version

الصورة المدرسية العامة

Part I

القسم الاول

Published by the AAMD, Washington,
D.C., U.S.A., 1975. By K. Nihira,
R. Foster, M. Shellhaas, & H. Leland

Translated by Farouq Farie Elrousan

ترجمة : فاروق الروسان

Reviewed by Dr. Abdahal Z. Alkelany

مراجعة الدكتور عبد الله زيد الكيلاني

Amman, January 15, 1980

عمان في ١٥/١/١٩٨٠

© Farouq Farie Elrousan. Translated from English to Arabic with
permission from the American Association on Mental Deficiency (AAMD),
Washington, D.C., U.S.A.

الاسم : _____ (الاول) _____ (الاخير) _____
 تاريخ الميلاد : _____ الجنس : ذكر _____ انثى _____
 تاريخ التطيق : _____ (اليوم) _____ (الشهر) _____ (السنة) _____
 اسم الفاحص : _____ مدرسة / معهد : _____
 منذ متى تعرف هذا الطفل : _____ (سنة / سنوات) _____ (شهر / اشهر) _____
 (اسبوع / اسابيع) _____
 نسبة الذكاء : _____ مقاسا باختبار _____ بتاريخ _____
 مصدر المعلومات وعلاقته بالمفحوص : أب _____ أم _____
 معلم _____ معلمة _____ (يذكر بالاسم)
 ملاحظة الفاحص للطفل مع تحديد موقف الملاحظة بوضوح ، ضع
 إشارة (✓) في المكان المناسب : في الصف _____
 : في البيت _____
 : في المطعم _____
 : في المشغل _____
 : مواقف اخرى (حدد) _____

معلومات اضافية : _____

تعليمات : —

يتضمن هذا المقياس عددا من العبارات التي تصف بعضا من الطرق التي يتعرف بها الناس في المواقف المختلفة .
 يمكن تطبيق هذا المقياس بطرق مختلفة ، ويتضمن الدليل العرفق وصفا لهذه الطرق
 بالإضافة الى تعليمات التصحيح .

تعليمات القسم الاول : —

هناك نوعان من الفقرات في القسم الاول من هذا المقياس ، حيث يتطلب النوع الاول ان
 تختار واحدة فقط من العبارات المذكورة .

مثال :-

٢ - تناول الطعام في الأماكن العامة : ضع دائرة حول القيمة المدرجة

لمباراة واحدة فقط مما يلي :-

يطلب وجبات كاملة في المطاعم ٣

يطلب وجبات خفيفة مثل الساندويشات ⑤

يطلب مشروبات خفيفة من محل بيع

المسرطبات ١

لا يطلب وجبات في المطاعم العامة صفر

٢

لاحظ ان العبارات مرتبة حسب درجة صعوبتها ١، ٢، ٣، صفر .

ضع دائرة امام افضل عبارة تصف اكثر المهمات صعوبة والتي يقوم بها المفحوص في العادة ، ففي هذا المثال سبق ان لوحظ الفرد وهو يطلب وجبات خفيفة من مثل الساندويشات (المباراة ٢) ولكنه لا يستطيع ان يطلب وجبة كاملة (المباراة ٣) ، لذلك وضعه الدائرة حول رقم ٢ في هذا المثال ، وفي تقدير الدرجة لهذه الفقرة ، يكتب الرقم ٢ في الدائرة الى اليسار .

اما النوع الثاني من الفقرات فانه يتطلب من الفاحص ان يضع اشارة (✓) امام كل عبارة تنطبق على المفحوص .

٤ - اداب المائدة : ضع اشارة (✓) امام كل عبارة تنطبق على المفحوص :-

أ) يبلع الطعام دون مضغه

ب) يمضغ الطعام وفمه مفتوح

ج) يسقط الطعام على المائدة او الارض

د) يستخدم مناديل السفرة بشكل غير صحيح او لا يستخدمها مطلقا

هـ) يتكلم وفمه مملوء بالطعام

و) يأخذ الطعام من صحن الآخرين

ز) يسرع او يبطئ في تناول الطعام اكثر مما يجب

ح) يعمد في الطعام باصابعه

ط) لا شيء مما سبق

ي) هذه الفقرة لا تنطبق على الفرد بسبب اعتياده

كلها على الآخرين

اذا اخترت هذه العبارة قضع صفرا في الدائرة الى اليسار

٨ - عدد العبارات التي اختارتها

٦

في المثال السابق وضعت الإشارة (✓) امام العبارتين الثانية والرابعة وهذا يعني ان المفحوص " يمتلئ الطعام وفيه مفتوح " وانه يستخدم مناديل السفر بشكل غير صحيح . في عملية تقدير الدرجة يتم طرح عدد العبارات التي وضعت الإشارة امامها وندرها في هذا المثال ٢ من المجموعة الكلي ٨، وبذلك تكون درجة هذه الفقرة ٦ تكتب في الدائرة الى اليمين.

الا ان هناك فقرات لا تتطلب عملية الطرح هذه في حساب الدرجة، بل تؤخذ عدد العبارات التي اختيرت وأغرم اليها بعلامة (✓) لتمثل درجة الفقرة التي تكتب في الدائرة، اما عبارة " لاشي " مما سبق" لقد وضعت لاغراض التطبيق فقط، ولا تعتبر في حساب الدرجة.

ان بعض الفقرات قد تتضمن انواعا من السلوك تتعارض بوضوح مع الانظمة السائدة (مثل استعمال التلفون)، او ان الفرد لا يستطيع القيام بها لان الفرصة لم تتوفر له (مثلا السفر بسيارة الاجرة في الاماكن الريفية)، في مثل هذه الحالات فانه يطلب من الفاحص ان يستكمل وضع تقديرات للمفحوص. اعط الفرد درجة للفقرة اذا كنت تشعر بشكل اكيد ومطلق ان المفحوص قادر على القيام بها دون تدريب اضافي فيما اذا توفرت له الفرصة المناسبة. اكتب عبارة " مخالفه للانظمة " او عبارة " لم تتوفر له الفرصة " مقابل تلك العبارات التي ينطبق عليها هذا الوصف، ان كتابة مثل هذه الملاحظات لا تؤثر على التقدير النهائي لتلك الفقرة، بل انها تساهم في فهم وتفسير سلوك المفحوص التكيفي مع البيئة.

يرجى ملاحظة القواعد العامة التالية في تعبئة هذا المقياس: -

١ - في بعض الفقرات والتي تتضمن عبارات مثل " بمساعدة الاخرين او بمساعدة الكبار " في انجاز المهمة فان ذلك يعني المساعدة الجسمية المباشرة.

٢ - اعط المفحوص تقديرا عن الفقرة اذا كان يحتاج الى حثه لفظيا او تذكيره بالقيام بالعمل، ما لم تنص الفقرة على " بدون حث او " بدون تذكير".

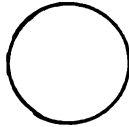
ان هذا المقياس معد لاغراض عامة، وقد لا تكون بعض الفقرات مناسبة للمواقف الخاصة، ومع ذلك يرجى محاولة تعبئة كل الفقرات.

القسم الاول

١ - الوظائف الاستقلالية

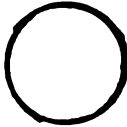
١ (تناول الطعام :-

١ - استعمال ادوات العائدة : ضع دائرة حول القيمة العددية لعبارة واحدة فقط ما يلي :-



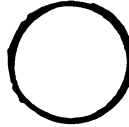
- ٦ يستخدم السكن والشوكة بشكل صحيح ودقيق
٥ يستخدم السكن في القطع والدهن
يستعمل الطمقة والشوكة في تناول الطعام
٤ بشكل صحيح
٣ يستعمل الطمقة والشوكة مع الكثير من الازاقة
٢ يستعمل الطمقة بشكل صحيح
١ يستعمل الطمقة مع الكثير من الازاقة
صفر يأكل باصابعه او يجب ان يطعمه احد

٢ - تناول الطعام في الاماكن العامة : ضع دائرة حول القيمة العددية لعبارة واحدة فقط ما يلي :-



- ٣ يطلب وجبات كاملة في المطاعم
٢ يطلب وجبات خفيفة من مثل الساندويش
١ يطلب مشروبات خفيفة من محل بيع العرطبات
لا يستطيع ان يطلب وجبات في المطاعم العامة
صفر

٣ - تناول السوائل : ضع دائرة حول القيمة العددية لعبارة واحدة فقط ما يلي :-

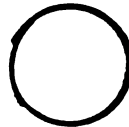


- ٣ يشرب دون اوراق وهو يحمل الكأس بيد واحدة
٢ يشرب من الكأس بدون مساعدة وبشكل صحيح
١ يشرب من الكأس بدون مساعدة مع الكثير من الازاقة
لا يستطيع ان يشرب من الكأس دون مساعدة
صفر

٤ - اداب المائدة : ضع اشارة (س) امام كل عبارة تنطبق على المفحوص :-

- (أ) يبلع الطعام دون مضغه
(ب) يعض الطعام وفيه مفتوح
(ج) يسقط الطعام على المائدة او الارض
(د) يستخدم مناديل السفرة بشكل غير صحيح
او لا يستخدمها مطلقا
(هـ) يتكلم وفيه مملوء بالطعام
(و) يأخذ الطعام من صحن الاخرين
(ز) يسرع او يبطئ في تناول الطعام اكثر
من يجب
(ح) يعمد بالطعام باصابعه
(ط) لا شيء مما سبق
(ي) هذه الفقرة لا تنطبق على الفرد بسبب كونه
مقعدا في فراشه او ان طعامه يفتقر الى
السوائل فقط ، اذا اخترت هذه العبارة
فضع صفرا في الدائرة او الى اليسار

٨ - عدد العبارات التي اشير اليها



١ (تناول الطعام اجمع ١ - ٤

(ب) استعمال المرحاض :-

- ٥ - التدريب على استعمال المرحاض : ضع دائرة حول القيمة المدركة لعبارة واحدة فقط مما يلي :-

لا يتعرض لحوادث عند ذهابه للمرحاض اطلاقاً (مثلا وقع

تبول ، تبرز لا ارادى)

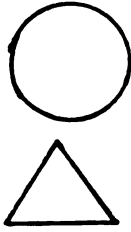
٤

٣

٢

١

صفر



(ب) استعمال المرحاض ادخل ٥ ←

(د) النظافة :-

- ٦ - فصل اليدين والوجه : ضع إشارة (✓) امام كل عبارة تنطبق على المفحوص :-

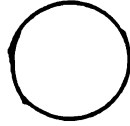
أ) يغسل يديه بالماء بون

ب) يغسل وجهه بالماء بون

ج) يغسل يديه ووجهه بالماء

د) يجفف يديه ووجهه

هـ) لا شيء مما سبق



- ٧ - الاستحمام : ضع دائرة حول القيمة المدركة لعبارة واحدة فقط مما يلي :-

يستعد للاستحمام ويستخدم بدون مساعدة

يستحم ويجفف نفسه كلياً دون حشا ومساعدة

يستحم ويجفف نفسه بشكل مقبول بنفسه

يستحم ويجفف نفسه بمساعدة من الآخرين

يحاول استعمال الصابون في تدعيم نفسه

يبدى تعاوناً حين يقوم الآخرون بتدعيمه وتجفيفه

لا يبدى أية محاولة لتدعيم وتجفيف نفسه

صفر

- ٨ - الصحة الشخصية : ضع إشارة (✓) امام كل عبارة تنطبق على المفحوص :-

أ) رائحة ابطه كريهة

ب) لا يغير ملابسه الداخلية بانتظام بنفسه

ج) جسمه متسخ في الزاوية لم يساعد احد في تنظيفه

د) لا يحافظ على نظافة اظافره بنفسه

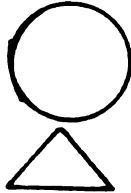
هـ) لا شيء مما سبق

و) هذه الفقرة لا تنطبق على الفرد بسبب اعتماده على الآخرين ،

إذا اخترت هذه العبارة فضع صفراً في الدائرة الى اليسار

(د) النظافة ادخل ٥ ←

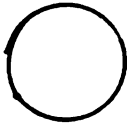
عدد العبارات
التي اشير اليها =



(د) المظهر العام :-

٩ - وضع الجسم أثناء الوقوف : ضع إشارة (✓) امام كل عبارة تنطبق على المفهوم :-

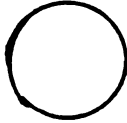
٨ - عدد العبارة التي
اشير اليها =



- _____ أ) يبقى فمه مفتوحا
_____ ب) رأسه متدل الى الاسفل
_____ ج) يبدوا بطنه بارزا بسبب وضعه الجسمي
_____ د) تبدو اكتافه ملتوية ومنحنية الى الامام والخلف
_____ هـ) يمشي واصابع قدميه متجه الى الخارج او
الداخل
_____ و) يمشي مباعدة بين قدميه
_____ ز) يمشي متناظرا او يجز قدميه او يغرب بهما
الارض
_____ ح) يمشي على اطراف اصابعه
_____ ط) لا شيء مما سبق
_____ ي) هذه الفقرة لا تنطبق على الفرد بسبب كونه
مقعدا في فراشه ، اذا اخترت هذه العبارة
_____ فضع صفرا في الدائرة الى اليسار

١٠ - اللباس : ضع إشارة (✓) امام كل عبارة تنطبق على المفهوم :-

٧ - عدد العبارة التي
اشير اليها =



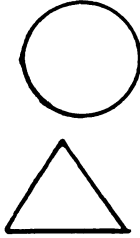
- _____ أ) يرتدى ملبسه بشكل غير صحيح اذا لم
يساعده احد
_____ ب) يرتدى ملابس ممزقة وبدون كي اذا لم
ينبه الى ذلك
_____ ج) يعتمد الى ارتداء ملبسه المتسخة اذا لم
ينبه الى ذلك
_____ د) يرتدى ملابس الوانها متنافرة اذا لم ينبه
الى ذلك
_____ هـ) لا يعرف الفرق بين هذا العمل وهذا
المناسبات
_____ و) لا يختار لباسا مختلفا للمناسبات الرسمية
_____ ز) لا يرتدى ملابس خاصة تلائم الاحوال الجوية
المختلفة مثل المعطف الشتوي والحداء المطاطي
_____ ح) لا شيء مما سبق
_____ ط) هذه الفقرة لا تنطبق على الفرد بسبب كونه
مقعدا على الآخرين ، اذا اخترت هذه العبارة
_____ فضع صفرا في الدائرة الى اليسار



(د) المظهر العام ← اجمع ٩ - ١٠

١١- العناية بالملابس : ضع إشارة (✓) امام كل عبارة تنطبق على المفهوم :-

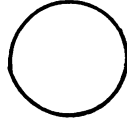
- (أ) يمسح ويلمع حذائه عند الحاجة
(ب) يضع ملابسه في مكانها بشكل مرتب
(ح) هذه العبارة لا تنطبق على طلبة المدارس
(د) يعلق ملابسه ويضعها مرتبة في مكانها دون تذكره بذلك
(هـ) لا شيء مما سبق
- ادخل ١١
- (هـ) العناية بالملابس



و) ارتداء الملابس :-

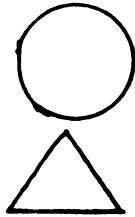
١٢- ارتداء الملابس : ضع دائرة حول القيمة العددية لعبارة واحدة فقط ما يلي :-

- يرتدي ملابسه بنفسه كالقمصان الشتوي والحذاء المطاطي ٥
يرتدي كل من ملابسه بنفسه عند حته بالكلام ٤
يلبس نفسه بشد ملابسه كلها وارتداها عند حته بالكلام
وساعده في تثبيتها ٣
يلبس نفسه بمساعدة الاخرين بشد معظم ملابسه وتثبيتها ٢
يبدى تعاوناً حين يلبسه الاخرون بعد ذراعيه او رجليه ١
يجب ان يلبسه الاخرون كلها صفر



١٣- الحذاء : ضع إشارة (✓) امام كل عبارة تنطبق على المفهوم :-

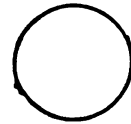
- (أ) يلبس حذائه بشكل صحيح دون مساعدة
(ب) يربط حذائه دون مساعدة
(ح) يفك رباط حذائه دون مساعدة
(د) يخلع حذائه دون ساعده
(هـ) لا شيء مما سبق
- اجمع ١٢-١٣
- و) ارتداء الملابس



ز) التنقل :-

١٤- حسن الاتجاه : ضع دائرة حول القيمة العددية لعبارة واحدة فقط ما يلي :-

- يدركه ان يبتعد حوالي ١٥٠م عن المدرسة دون ان يضع ٣
يتجول في المنطقة القريبة من المدرسة دون ان يضع ٢
يتجول في منطقة غرفة الصف لوحده ١
يضع عند ما يترك غرفته صفر

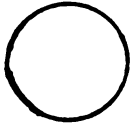


- ١٥- وسائل المواصلات العامة : ضع إشارة (✓) امام كل عبارة تنطبق على المفهوم :-
- (أ) ينتقل مسافات طويلة بين البلدان بالبحر او الطائرة _____
 (ب) يأخذ سيارة الاجرة (التاكسي) معتمدا على نفسه _____
 (ج) يستخدم المواصلات العامة داخل المدينة مثل _____
 البحر في الوصول الى مكان غير معروف _____
 سابقا ، معتمدا على نفسه _____
 (د) يستخدم المواصلات العامة داخل المدينة مثل _____
 البحر في الوصول الى مكان معروف له سابقا معتمدا _____
 على نفسه _____
- (هـ) لا شيء * مما سبق _____
- (ز) التنقل ← اجمع ١٤-١٥ _____
- (و) الوظائف الاستقلالية الاخرى : - _____

- ١٦- التلفون : ضع إشارة (✓) امام كل عبارة تنطبق على المفهوم :-
- (أ) يستعمل دليل التلفون _____
 (ب) يجري مكالمات تلفونية من مكتب البريد _____
 (ج) يجري مكالمات تلفونية من تلفون خصوصي _____
 (د) يرد على التلفون بشكل مناسب _____
 (هـ) يأخذ رسائل تلفونية _____
 (و) لا شيء * مما سبق _____
- ١٧- وظائف استقلالية متفرقة : ضع إشارة (✓) امام كل عبارة تنطبق على المفهوم :-
- (أ) يتحكم بشهيته للطعام ويأكل باعتدال _____
 (ب) يعرف اجور رسائل البريد ويشتري الطوابع من _____
 مكتب البريد _____
 (ج) يهتم بصحته الشخصية . مثلا : يغير ملابسه المبتلة _____
 (د) يعالج الاصابات البسيطة مثل الجروح والحروق _____
 (هـ) يعرف كيف و اين يلجأ الى الطبيب او طبيب الاسنان _____
 عند الحاجة _____
 (و) يعرف شيئا عن الخدمات المتوفرة في المجتمع المحلي (الشرطة ، الهيئات المحلية ، متصرف ، مختار _____
- (ز) لا شيء * مما سبق _____
- (و) الوظائف الاستقلالية الاخرى ← اجمع ١٦-١٧ _____
- ١٠٠ . الوظائف الاستقلالية ← اجمع المثلثات _____
- ١- ر _____

٢ - التطور الجسمي :-(أ) التطور الجسمي (القدرة الوظيفية القابلة للملاحظة) :-١٨- البصر (بالنظارات اذا استعملت) :- ضع دائرة حول القيمة العددية لعبارة واحدة

فقط ما يلي :-



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صفر

ليس عنده اية صوبة في البصر

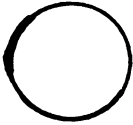
عنده بعض الصعوبة في البصر

عنده صعوبة كبيرة في البصر

لا يبصر إطلاقاً

١٩- السمع (بالوسائل السمعية اذا استعملت) :- ضع دائرة حول القيمة العددية لعبارة واحدة

فقط ما يلي :-



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صفر

ليس عنده اية صعوبة في السمع

عنده صعوبة في السمع

عنده صعوبة كبيرة في السمع

لا يسمع إطلاقاً

أ) التطور الحسي ← اجمع ١٨-١٩

ب) التطور الحركي :-

٢٠- توازن الجسم :- ضع دائرة حول القيمة العددية لعبارة واحدة فقط ما يلي :-

• يقف على رؤوس ارجله لمدة عشر ثواني اذا طلب منه ذلك

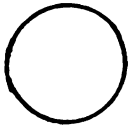
يقف على قدم واحد لمدة ثانيتين اذا طلب منه ذلك

يقف بدون سند

يقف بسند

يجلس بدون سند

لا يستطيع ان يقوم بأى من الاعمال السابقة



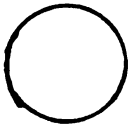
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صفر

٢١- المشي والركض :- ضع إشارة (✓) امام كل عبارة تنطبق على المفحور :-أ) يمشي وحدهب) يمعد وينزل الدرج وحدهج) ينزل الدرج باستخدام قدميه بالتناوبد) يركض دون ان يتكرر سقوطه على الدرجهـ) يجلس، يقفز، يثب عند المشيو) لا شيء مما سبق

٢٢- التحكم في حركة اليدين : ضع إشارة (✓) امام كل عبارة تنطبق على المفهوم :-

- (أ) يتلقف الكرة
(ب) يقذف الكرة في الهواء
(ح) يرفع الكأس والفنجان
(د) يمسك بالسبابة والابهام
(هـ) لا شيء مما سبق

٢٣- استعمال الاطراف : ضع إشارة (✓) امام كل عبارة تنطبق على المفهوم :-

- (أ) يستعمل ذراعه اليمنى بشكل فعال
(ب) يستعمل ذراعه اليسرى بشكل فعال
(ح) يستعمل رجله اليمنى بشكل فعال
(د) يستعمل رجله اليسرى بشكل فعال
(هـ) لا شيء مما سبق

٢- التطور الحركي ← اجمع ٢٠-٢٣
التطور الجسمي ← اجمع العنقشات أ-ب

٣- النشاط الاجتماعي :-

(أ) التعامل بالنقود وتنظيم الميزانية :-

٢٤- التعامل بالنقود : ضع دائرة حول القيمة العددية لعبارة واحدة فقط مما يلي :-

- ٤- يستعمل الخدمات المصرفية معتمدا على نفسه
يمكنه فك النقود بشكل صحيح ولكنه لا يستعمل
٣- الخدمات المصرفية
يمكنه تجميع فئات القطع النقدية المختلفة ليكون
٢- ديناارا واحدا
يستعمل النقود ولكنه لا يستطيع فك النقود
١- بشكل صحيح
صفر لا يستعمل النقود

٢٥- تنظيم الميزانية : ضع إشارة (✓) امام كل عبارة تنطبق على المفهوم :-

- (أ) يوفر النقود لأغراض خاصة
 (ب) يضع ميزانية توزع على اوجه الصرف المختلفة
 كالمواصلات والوجبات . . . الخ
 (ج) يصرف النقود بنوع من التخطيط المسبق
 (د) يتحكم (يحدد) المجالات التي يمكن ان
 ينفق فيها
 (هـ) لا شيء مما سبق
- (أ) التعامل بالنقود وتنظيم الميزانية
 اجمع ٢٤ - ٢٥ ←
- (ب) مهارات الشراء (التسويق) :-

٢٦- المهارات الشرائية المكلف بها : ضع دائرة حول القيمة العددية لعبارة واحدة فقط مما يلي

- ٤ يذهب الى عدة متاجر لشراء اشياء متنوعة
 ٣ يذهب الى متجر واحد لشراء شيء واحد
 يرسله في مهلات لشراء اشياء بسيطة بدون
 قائمة مشتريات
 ٢ يرسل في مهلات لشراء حاجات بسيطة
 ومعه قائمة مشتريات
 ١ لا يركن اليه في مهلة شرائية
 صفر

٢٧- الشراء : ضع دائرة حول القيمة العددية لعبارة واحدة فقط مما يلي :-

- ٥ يشتري كل ملابسه بنفسه
 ٤ يشتري ملحقات ملابسه بنفسه (حزام ، ربطه . . . الخ)
 يقوم بشراء حاجات بسيطة بدون مساعدة كالحلوى
 والمرطبات
 ٣ يذهب للتسوق مع شيء من الرقابة البسيطة
 ٢ يذهب للتسوق مع رقابة مباشرة
 ١ لا يذهب للتسوق
 صفر
- (ب) مهارات الشراء
 اجمع ٢٦ - ٢٧ ←
- ٣ - النشاط الاقتصادي
 اجمع أ - ب ←

٤ - التطوير اللغوي :-

(أ) التعبير :-

٢٨ - الكتابة : ضع دائرة حول القيمة المدربة لعبارة واحد فقط ما يلي :-

- | | |
|-----|-----------------------------|
| ٥ | يكتب رسائل مفهومه وذات معنى |
| ٤ | يكتب ملاحظات ومذكرات قصيرة |
| ٣ | يكتب حدود أربعين كلمة |
| ٢ | يكتب حدود عشر كلمات |
| ١ | يكتب اسمه |
| صفر | لا يستطيع ان يكتب اية كلمة |

٢٩ - التعبير اللفظي : ضع اشارة (✓) امام كل عبارة تنطبق على المفهوم :-

- | | |
|-------|---|
| _____ | (أ) يومى * برأسه او يبتسم ليحبر عن سعادته |
| _____ | (ب) يحبر عن جوعه |
| _____ | (ج) يحبر عن حاجاته بالاشارة باليد او باحداث اصوات |
| _____ | (د) يقهقه او يضحك عندما يكون مسرورا |
| _____ | (هـ) يحبر عن سروره او غضبه باصدار اصوات |
| _____ | (و) لديه القدرة على الكلام (اعط القيمة ٦ لهذه الفقرة اذا اخترت هذه العبارة بخفى النظر عن العبارات الاخرى) |
| _____ | (ز) لاشي * مما سبق |

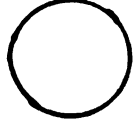
٣٠ - النطق : ضع اشارة (✓) امام كل عبارة تنطبق على المفهوم، اما اذا كان المفهوم غير

قادر على الكلام فضع اشارة (✓) امام عبارة " لاشي * مما سبق " ثم ضع صفر في الدائرة الى اليسار .

٤ - عدد العبارات المشار اليها =

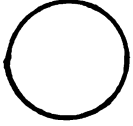
- | | |
|-------|---|
| _____ | (أ) يتكلم بصوت منخفض، كلامه منخفض ، وعلى شكل همسا او يهيب سماعه |
| _____ | (ب) يتكلم ببطء او بتأن ويهذل جهد |
| _____ | (ج) يتكلم باستعمال وتساوع وباندفاع |
| _____ | (د) في كلامه وقفات او فترات صمت او تقطع او غير منتظم في الكلام |
| _____ | (هـ) لاشي * مما سبق |

٣١- الجملة : ضع دائرة حول القيمة العددية لعبارة واحدة فقط مما يلي :-



- ٣ يستعمل احب انا جملا مركبة تتضمن كلمات من نوع " بسبب" لان " لكن" الخ ...
٢ يسأل اسئلة يستعمل فيها ادوات الاستفهام من نوع " لماذا " كيف " ماذا " الخ ...
١ يتكلم مستعملا جملا بسيطة
صفر يتكلم بمبارات بدائية فقط او بشكل غير لفظي

٣٢- استعمال الكلمات : ضع دائرة حول القيمة العددية لعبارة واحدة فقط مما يلي :-

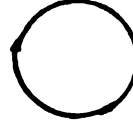


- ٤ يتكلم عن افعال عندما يصف صورا
٣ يسمي اشخاصا او اشياء عندما يصف صورا
٢ يسمي الاشياء المألوفة له
١ يسأل عن اشياء مستخدما اسماها الصحيحة
لا يستطيع الكلام او يكاد يكون غير قادر على الكلام



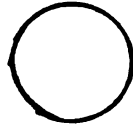
أ) التعبير ← اجمع ٢٨-٣٢
ب) الاستيعاب :-

٣٣- القراءة : ضع دائرة حول القيمة العددية لعبارة واحدة فقط مما يلي :-



- ٥ يقرأ كتبها تناسب اطفال سن التاسعة واكثر
٤ يقرأ كتبها تناسب اطفال سن السابعة واكثر
٣ يقرأ قصصا بسيطة وصوره
٢ يقرأ لوحات مكتوبة بخط كبير مثل " ممنوع الوقوف"
١ للرجال " سيدات"
يتعرف على عشر كلمات او اكثر بالنظر
يتعرف على اقل من عشر كلمات او لا شيء على الاطلاق

٣٤- التعليمات المعقدة : ضع اشارة (✓) على كل عبارة تنطبق على المفحوص :-



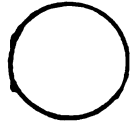
- أ) يفهم تعليمات تتضمن ادوات مثل " على " " في " " خلف " " تحت " _____
ب) يفهم تعليمات تشير الى تسلسل الاشياء التي يجب ان تنفذ مثلا اعمل كذا ، واولا ثم اعمل كذا ثانيا _____
ج) يفهم التعليمات التي تتطلب اتخاذ قرار مثلا " اذا حدث كذا افعل كذا ، والا افعل كذا " _____
د) لا شيء مما سبق _____



ب) الاستيعاب ← اجمع ٣٣-٣٤

(د) التطور الاجتماعي للغة :-

٣٥- المحادثة : ضع إشارة (✓) على كل عبارة تنطبق على المفحوص :-



(أ) يستعمل عبارات مثل " من فضلك " " شكرا " عفووا

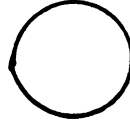
(ب) اجتماعي ويتحدث أثناء تناول الطعام

(ج) يتحدث الى الآخرين عن الرياضة

الاسرة، النشاطات الاجتماعية

(د) لا شيء مما سبق

٣٦- مظاهر اخرى للتطور اللغوي : ضع إشارة (✓) امام كل عبارة تنطبق على المفحوص :-



(أ) يمكن مناقشته منطقيا

(ب) يستجيب بشكل واضح حين يتحدث اليه

احد

(ج) حديث معقول

(د) يقرأ الكتب، الجرائد، والمجلات للتسلية

(هـ) يروي قصة بشي " من الصعوبة او بدون

اية صعوبة

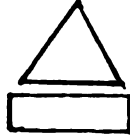
(و) يقرأ البيانات الرئيسية في نموذج (طالب

عمل مثلا) بشكل معقول

(ز) لا شيء مما سبق

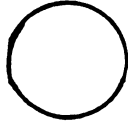
(ح) التطور اللغوي الاجتماعي ← اجمع ٣٥=٣٦

٤- التطور اللغوي ← اجمع المثلثات أ - ب



٥- الارقام والوقت :-

٣٧- الارقام : ضع دائرة حول القيمة العددية لعبارة واحدة فقط ما يلي :-



- ٥ يقوم بمعطيات الجمع والطرح البسيطة
٤ يحدد عشرة اشياء او اكثر
٣ يعد هجاء الاشياء بشكل السي
٢ يعد شيئين بقوله واحد، اثنين
١ يميز بين مفهوم "واحد" "كثير" "او كثير جدا"
صفر لا يدرك معنى الارقام

٣٨- الوقت : ضع اشارة (✓) امام كل عبارة تنطبق على المفهوم :-

(أ) يعرف الوقت بالذقيقة بشكل صحيح بالنظر الى

ساعة الحائط او اليد

(ب) يدرك الفترات الزمنية الواقعة متلايين

الساعة ٣٣٠ - ٤٣٠

(ج) يدرك التكافؤ بين التعابير المختلفة

الموقت مثلا ١٥ ٩١ هي نفسها الساعة

التاسعة والربع

(د) يربط بين الوقت الذي تشير اليه الساعة

وبين اعمال وافعال مختلفة

(هـ) لا شيء مما سبق

٣٩- مفهوم الزمن : ضع اشارة (✓) امام كل عبارة تنطبق على المفهوم :-

(أ) يسمى ايام الاسبوع

(ب) يشير بشكل صحيح الى "الصباح" وبعد

"الظهر"

(ج) يدرك الفرق بين اليوم والاسبوع،

والساعة والشهر والسنة

(د) لا شيء مما سبق

٥- الارقام والوقت : اجمع ٣٧-٣٩

٦- النشاط المهني :-

٤٠- درجة التعقيد في العمل : ضع دائرة حول القيمة العددية لعبارة واحدة فقط مما يلي :-

يستطيع ان يؤدى عملا يتطلب استخدام ادوات

والا ت من مثل المشاغل، الخياطة ح. ه. الخ ٢

يستطيع ان يؤدى عملا بسيطا مثل العمل

في حديقة او مسح الارض او جمع النفايات ١

لا يستطيع ان يؤدى او عمل على الاطلاق صفر

٤١- انجاز العمل : ضع اشارة (✓) امام كل عبارة تنطبق على المفهوم :-

(ملاحظة : اذا اعطيت الفقرة رقم ٤٠ صفرا ، فضع اشارة (✓) امام عبارة "لا شيء" مما سبق

في هذه الفقرة ، واعط هذه الفقرة ، صفرا بوضعه في الدائرة الى اليسار)

(أ) يعرض نفسه والاخرين للخسر بسبب اهماله

(ب) لا يعتني بادواته

(ج) يطي "جدا" في عمله

(د) عمله مشوش ، فيه فوضى وغير متقن

(هـ) لا شيء مما سبق

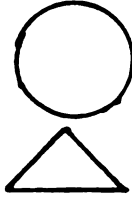
٤- عدد العبارات التي
اشير اليها =

٤٢- عادات العمل : ضع إشارة (✓) امام كل عبارة تنطبق على المفهوم :-

(ملاحظة) : اذا اعطيت الفقرة رقم ٤٠ صفرا ، فضع إشارة (✓) امام عبارة "لاشيء" مسبقا في هذه الفقرة ، واعط هذه الفقرة صفرا بوضعه في الدائرة الى اليسار .

- أ) يتأخر عن عمله دون سبب معقول
ب) كثيرا ما يتغيب عن عمله
ج) يحتاج الى حدث متواصل حتى ينهي عمله
د) يترك العمل بدون استئذان
هـ) يتذمر او يتبرم من العمل
و) لا شيء مما سبق

٥- عدد العبارات التي
اشير اليها =



٦- النشاط المهني اجمع ٤٠-٤٢ ←

٧- التوجيه الذاتي :-

٤٣- المبادرة : ضع دائرة حول القيمة العددية لعبارة واحدة فقط ما يلي :-

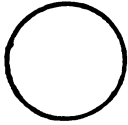
- بأخذ زمام المبادرة في معظم نشاطات خاصة كالأعمال
او الألعاب... الخ ٣
يسأل في اذا كان هناك شيئا ما يحمله او يستكشف
ما يحيط به في البيت او الساحة... الخ ٢
ينشغل في نشاطات او اعمال عند ما يطلب منه
او يوجه لها ١

لا ينشغل في نشاطات اذا طالب منه كأن يجمع
العابه ويحفظها في مكانها... الخ صفر

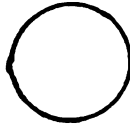
٤٤- السلبية : ضع إشارة (✓) امام كل عبارة تنطبق على المفهوم :-

- أ) لا بد من اجباره على عمل اشياء
ب) ليس عنده طموح
ج) لا يبدو انه مهتم بالاشياء
د) اخر من ينتهي عمله بسبب تفسيه الوقت
هـ) يعتمد على الآخرين في مساعدته دون ان
يكون هناك داع لذلك
و) بطيء الحركة ومتراخ
ز) لا شيء مما سبق
ح) هذه الفقرة لا تنطبق على الفرد بسبب اعتياده
كلها على الآخرين ، اذا اخترت هذه العبارة
فضع صفرا في الدائرة الى اليسار

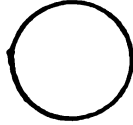
٦- عدد العبارات التي
اشير اليها =



أ) المبادرة - اجمع ٤٣-٤٤ ←

(ب) المثابرة :-٤٥- الانتباه : ضع دائرة حول القيمة المدركة لعبارة واحدة فقط مما يلي :-

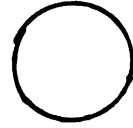
- يوجه انتباهه للنشاطات الهادفة لأكثر من خمس عشرة
دقيقة مثلا : اللعب، القراءة، التنظيف ٤
- يوجه انتباهه للنشاطات الهادفة لخمس عشرة
دقيقة على الأقل ٣
- يوجه انتباهه للنشاطات الهادفة لعشر دقائق
على الأقل ٢
- يوجه انتباهه للنشاطات الهادفة لمدة خمس
دقائق على الأقل ١
- لا يستطيع ان يوجه انتباهه للنشاطات الهادفة
لفترة تصل الى خمس دقائق
صفر

٤٦- الاصرار : ضع إشارة (✓) امام كل عبارة تنطبق على المفحوص :-٤- عدد العبارات التي
اثير اليها =

- أ () تخمد همته بسهولة
- ب () يفشل في انجاز اعماله
- ج () ينتقل بسرعة من نشاط الى اخر
- د () يحتاج الى تشجيع متواصل لانجاز عمله
- هـ () لا شيء مما سبق
- و () هذه الفقرة لا تنطبق على الفرد بسبب كونه
غير قادر على انجاز اية نشاطات منظمة
اذا اخترت هذه العبارة فضع صفرا
- في الدائرة الى اليسار



اجمع ٤٥-٤٦

٤٧- نشاطات اوقات الفراغ : ضع إشارة (✓) امام كل عبارة تنطبق على المفحوص :-

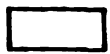
- أ () ينظم وقت فراغه بدرجة عالية ومناسبة
- ب () عنده هوايات مثل الرسم، التطريز، الخزف،
- وجمع الطوابيع
- ج () ينظم وقت فراغه بمستوى بسيط ومقبول
- د () لا شيء مما سبق



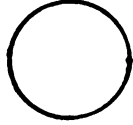
ادخل ٤٧

ج () وقت الفراغ

اجمع المثلثات أ - ج

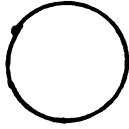
٧- التوجيه الذاتي

٨ - تحمل المسؤولية :-

٤٨ - الممتلكات الشخصية : ضع دائرة حول القيمة العددية لعبارة واحدة فقط مما يلي :-

- يعتمد عليهما ، فهو يحافظ على ممتلكاته الشخصية ٣
يعتمد عليه عادة ، فهو في العادة يحافظ على ممتلكاته الشخصية ٢
لا يعتمد عليه ، فهو نادرا ما يحافظ على ممتلكاته الشخصية ١

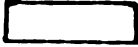
لا يتحمل المسؤولية على الاطلاق فهو لا يهتم بممتلكاته الشخصية
صفر

٤٩ - المسؤولية العامة : ضع دائرة حول القيمة العددية لعبارة واحدة فقط مما يلي :-

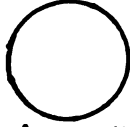
- حي الضمير ويتحمل الكثير من المسؤولية ، يقوم بجهود خاصة فهو ينجز دائما الاعمال الموكلة اليه ٣
يعتمد عليه في العادة ، فهو يبذل جهدا لحمل المسؤولية ويمكن للانسان ان يثق بدرجة معقولة ان الاعمال الموكلة اليه سوف تنجز ٢
لا يعتمد عليه فهو يبذل جهدا قليلا لتحصيل المسؤولية ولا يكون الانسان متأكدا ان الاعمال الموكلة اليه سوف تنجز ١

لا يعطى مسؤولية ، فهو غير قادر على تحمل المسؤولية على الاطلاق
صفر

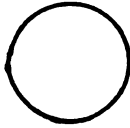
اجمع ٤٨-٤٩



٨ - تحمل المسؤولية :-

٩ - التنشئة الاجتماعية :-٥٠ - التعاون : ضع دائرة حول القيمة العددية لعبارة واحدة فقط مما يلي :-

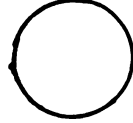
- يقوم بمساعدة الآخرين ٢
يرغب في مساعدة الآخرين اذا طالب منه ذلك ١
لا يساعد الآخرين مطلقا صفر

٥١ - تقدير الآخرين : ضع اشارة (✓) امام كل عبارة تنطبق على المفحوص :-

- (أ) يبدي اهتماما في شؤون الآخرين
(ب) يحافظ على ممتلكات الآخرين
(ج) يواجه ويدير شؤون الآخرين عندما يحتاجونه
(د) يحترم مشاعر الآخرين
(هـ) لا شيء مما سبق

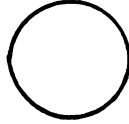
٥٢- معرفته بالآخرين : ضع اشارة (✓) امام كل عبارة تنطبق على المفحوص :-

- _____ أ) يتعرف على افراد أسرته
 _____ ب) يتعرف على الاشخاص الاخرين غير افراد أسرته
 _____ ج) لديه معلومات عن الاخرين من مثل العمل ، العنوان وعلاقته بهم
 _____ د) يعرف اسماء افراد القريبين منه ، مثلا اسماء زملائه في الصف ، والا جيرانه
 _____ هـ) يعرف اسماء افراد لا يلتقي معهم بانتظام
 _____ و) لا شيء مما سبق



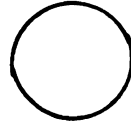
٥٣- التفاعل مع الآخرين : ضع دائرة حول القيمة العددية لعبارة واحدة فقط مما يلي :-

- _____ ٣ جماعية
 يتفاعل مع الاخرين لفترة قصيرة من الوقت
 على الاقل مثل عرض او تقديم العابه
 او ملابس او اشياء
 _____ ٢
 يتفاعل مع الاخرين بالتقليد وبشكل قليل
 لا يستجيب للآخرين بطريقة اجتماعية
 _____ ١ مقبولة
 صفر



٥٤- المشاركة في النشاطات الجماعية : ضع دائرة حول القيمة العددية لعبارة واحد فقط مما يلي :

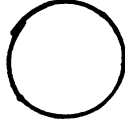
- _____ ٣ يتخذ المبادرة في النشاطات الجماعية
 (كقائد او منظم)
 يشارك في النشاطات الجماعية بحماس
 _____ ٢ مشاركة ايجابية
 يشارك في النشاطات الجماعية اذا شجع
 _____ ١ على ذلك مشاركة سلبية
 صفر لا يشارك في النشاطات الجماعية



٥٥- الانانية : ضع إشارة (✓) امام كل عبارة تنطبق على المفهوم :-

- أ (يرفض ان ينتظر دوره) _____
 ب (لا يشارك الاخرين) _____
 ج (يثير غائبا اذا لم يحقق مراده) _____
 د (يقاطع المدرس او المشرف وهو يساعد شخصا اخر) _____
 هـ (لا شيء مما سبق) _____
- و (هذه الفقرة لا تنطبق على الفرد بسبب عدم تفاعله الاجتماعي مع الاخرين . اذا اخترت هذه العبارة فضع صفرا في الدائرة الى اليسار) _____

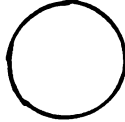
٥- عدد العبارات التي اشير اليها =



٥٦- النضج الاجتماعي : ضع إشارة (✓) امام كل عبارة تنطبق على المفهوم :-

- أ (الفتى مع الغرباء زائده) _____
 ب (يخاف من الغرباء) _____
 ج (يقوم بأي شيء ليكون اصدقا) _____
 د (يجب ان يمسك بأيدي كل شخص) _____
 هـ (هو الى الدوام في ذيل شخص ما) _____
 و (لا شيء مما سبق) _____
 ز (هذه الفقرة لا تنطبق على الفرد بسبب عدم تفاعله مع الاخرين او انسحابه كلياً) _____
- اذا اخترت هذه العبارة فضع صفرا في الدائرة الى اليسار

٥- عدد العبارات التي اشير اليها =



اجمع ٥٥-٥٦

٩- التنشئة الاجتماعية



Answer Sheet Booklet

AAMD, ABS, PART 1
Answer Sheet

كراسة نموذج الاجابات

الاسم : _____
 (الاول) (الاخير)

تاريخ الميلاد : _____
 (اليوم) (الشهر) (السنة)

تاريخ التطبيق : _____
 (اليوم) (الشهر) (السنة)

اسم الفاحص : _____ مدرسة / معهد _____

منذ متى تعرف هذا الطفل _____ (سنة / سنوات) _____ (شهر / اشهر) _____ (اسبوع / اسابيع)

نسبة الذكاء : _____ مقاماً باختيار _____ بتاريخ _____

مصدر المعلومات وعلاقته بالفحوص : اب _____ ام _____ معلم _____ (يذكر بالاسم)

ملاحظة الفاحص للطفل مع تحديد موقف الملاحظة بوضوح ، بوضوح
 اشارة (✓) في المكان المناسب : في الصف _____
 : في ساحة المدرسة _____
 : في البيت _____
 : في المطعم _____
 : في المشغل _____
 : مواقف اخرى (حدد) _____

معلومات اضافية _____

تعليمات تسجيل الاجابات :

مثال ١ : ضع دائرة حول القيمة العددية لواحدة فقط ما يلي : -

٢
 ⑦
 ٤

مثال ٢ : صفح دائرة حول كل حرف ينطبق على الفحوص ما يلي :-

١
 ①
 ②
 ③
 ٤
 ٥
 ٦
 ٧
 ٨
 ٩
 ٠

١٩- السمع	١٥- وسائل المواصلات العامة	د (العناية بالملابس
٣	أ	١١- العناية بالملابس :-
٢	ب	أ
١	ج	ب
صفر	د	ج
١٩-١٨	هـ *	د
٢٠- توازن الجسم	* ملاحظات من (هـ) 	هـ *
٥	١٥-١٤ (ز) الوظائف الاستقلالية الأخرى	* ملاحظات من (هـ) 
٤	١٦- التفهيم	هـ (ارتداء الملابس
٣	أ	١٢- ارتداء الملابس :-
٢	ب	٥
١	ج	٤
صفر	د	٣
٢١- المشي والركض	هـ	٢
أ	و *	١
ب	* ملاحظات من (و)	صفر
ج	١٧- الوظائف الاستقلالية متفرقة	١٣- الحذاء :-
د	أ	أ
هـ	ب	ب
و *	ج	ج
* ملاحظات من (و)	د	د
٢٢- التحكم في حركة اليدين	هـ	هـ *
أ	و	* ملاحظات من (هـ) 
ب	ز *	(و) التقبل
ج	* ملاحظة من (ز) 	١٤- حسن التجاه :-
د	١٦-١٧	٣
هـ *	٢- التطور الجسدي :-	٢
* ملاحظة من (هـ)	أ (التطور الحسي	١
٢٣- استعمال الاطراف	١٨- البصر	صفر
أ	٣	
ب	٢	
ج	١	
د	صفر	
هـ *		
* ملاحظة من (هـ) 		
٢٣-٢٠		
ب		

٣ - النشاطات الاقتصادية

أ) التعامل بالنقود وتنظيم الميزانية

٢٤ - التعامل بالنقود

٤
٣
٢
١
صفر

٢٥ - تنظيم الميزانية

١
ب
ح
د
هـ

* - ملاحظات عن (هـ) 
٢٤ - ٢٥

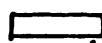
ب) مهارات الشراء

٢٦ - المهارات المكلف بها

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٢٧ - الشراء

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أ - ب

٤ - التطوير اللغوي

أ) التعبير

٢٨ - الكتابة

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صفر

٢٩ - التعبير اللفظي

أ
ب
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و
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٣٠ - النطق

أ
ب
ج
د
هـ

* - ملاحظات عن (هـ)

٣١ - الجمل

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٢
١
صفر

٣٢ - استعمال الكلمات

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٣
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صفر

٢٨ - ٣٢

ب) الاستماع

٣٣ - القراءة

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٣٤ - العمليات المعقدة

أ
ب
ج
د

* - ملاحظات عن (د) 
٣٢ - ٣٤

ج) التطوير الاجتماعي للغة

٣٥ - المحادثة

أ
ب
ج
د

* - ملاحظات عن (د)

هـ و ز ح ٤٤-٤٢ ب) الشايرة ٤٥-الانتباه ٤ ٣ ٢ ١ صفر ٤٦-الشايرة ب ح ر هـ و ملاحظات من (و) ٤٦-٤٥ ٤٧-نشاطات اوقات الفراغ ب ح ر ملاحظات من () ٤٧ ١-ح	٦-النشاط المهني ٤٥-درجة التقيد في العمل ٢ ١ صفر ٤١-انجاز العمل ١ ب - ٤ ح ر هـ ملاحظات من (هـ) ٤٢-عادات العمل ب ح - ٥ ر هـ و ملاحظات من (و) ٤٢-٤٠ ٧-التوجيه الذاتي أ) المبادرة ٤٣-المبادرة ٣ ٢ ١ صفر ٤٤-السلبية ب ح ر ٦ -	٢٦-مظاهر اخرى للتطور اللغوي أ ب ح ر هـ و ز ملاحظات من (ز) ٣٦-٣٥ ١-ح ٥-الارقام والوقت ٢٧-الارقام ٥ ٤ ٣ ٢ ١ صفر ٣٨-الوقت ب ح ر هـ ملاحظات من (هـ) ٣٩-مفهوم الزمن ب ح ملاحظات من (ر) ٣٩-٣٧
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٥٣- التفاعل مع الآخرين

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 ١
 صفر

٥٤- المشاركة في النشاطات الجماعية

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 صفر

٥٥- الانانية

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 هـ

و *

* - ملاحظات عن (و)

٥٦- النفج الاجتماعي

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 ب
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 هـ

و
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* ملاحظات عن (ز)

٥٦-٥٥

٨- تحمل المسؤولية

٤٨- الممتلكات الشخصية

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 — ٢
 ١
 صفر

٤٩- المسؤولية العامة

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 — ٢
 ١
 صفر

٤٩-٤٨

٩- التشقة الاجتماعية

٥٠- التعاون

٢
 — ١
 صفر

٥١- تقدير الآخرين

١
 ب
 — ٢
 ر
 هـ *

* - ملاحظات عن (هـ)

٥٢- معرفته بالآخرين

١
 ب
 — ٢
 ر
 هـ

و *

* - ملاحظات عن (و)

APPENDIX D

Summary Answer Sheets for Each Group

(NH, EMR, and SMR)

APPENDIX D

Summary Answer Sheets for Each Group (NH, EMR, and SMR)

AAMD, ABS, Public School, Version, Part 1

Institution/School Al-Gebeha Level Nonhandicapped Students Age 7³-8²
Date of Administration March 1980

Seq. No.	Sex	Indep. Funct.	Phys. Dev.	Econo. Activ.	Lang. Dev.	Number & Time	Vocat. Activ.	Self Direc.	Respo.	Sociali- zation
1	M	59	24	10	22	7	7	8	3	20
2	M	67	24	9	27	7	7	11	5	19
3	M	60	24	7	28	5	7	6	5	19
4	M	62	24	10	30	5	8	10	4	20
5	M	54	24	6	32	7	7	12	4	21
6	M	60	24	7	25	5	8	13	4	17
7	M	60	24	9	30	7	11	18	6	22
8	M	63	24	11	28	9	10	16	6	21
9	M	61	24	7	28	7	5	6	2	21
10	M	52	24	6	20	5	3	8	2	15
11	M	60	24	7	23	8	10	18	6	20
12	M	51	24	6	23	7	5	4	1	13
13	M	59	24	6	27	7	4	4	2	14
14	M	60	24	10	25	8	6	12	3	18
15	M	58	24	7	28	7	11	15	6	19
16	M	62	23	6	23	7	9	18	4	18
17	M	55	24	5	20	7	7	8	3	17
18	M	58	24	8	22	8	8	10	5	18
19	M	55	24	6	25	6	6	16	5	17
20	M	53	24	5	20	6	7	9	4	13
21	M	55	24	5	26	7	9	16	3	17
22	M	56	24	6	24	6	11	18	6	20
23	M	63	24	5	28	7	6	11	2	12
24	M	59	24	7	26	8	9	18	5	16
25	M	57	24	6	28	7	8	16	5	18
26	M	63	24	5	27	6	6	17	6	17
27	M	67	24	11	27	7	10	16	6	25
28	M	52	24	8	28	8	9	11	4	20
29	M	58	24	8	27	7	11	19	6	21
30	M	56	24	7	26	6	9	18	6	19

AAMD, ABS, Public School, Version, Part 1, Summary Answer Sheet

Institution/School Zeed Ben Alkatab Level Nonhandicapped Students Age 9³-10²

Date of Administration March 1980

Seq. No.	Sex	Indep. Funct.	Phys. Dev.	Econo. Activ.	Lang. Dev.	Number & Time	Vocat. Activ.	Self Direc.	Respo.	Sociali- zation
1	M	68	24	9	36	12	10	17	6	22
2	M	68	24	13	30	11	5	9	2	16
3	M	70	24	10	35	12	10	17	6	24
4	M	65	24	9	35	11	10	16	5	20
5	M	69	24	11	38	12	10	15	6	21
6	M	72	24	11	35	11	10	17	6	22
7	M	63	24	9	34	10	9	14	4	19
8	M	70	24	10	35	11	8	15	5	18
9	M	67	24	11	37	12	10	16	4	21
10	M	67	24	9	34	12	7	13	4	17
11	M	75	24	11	37	12	11	18	5	23
12	M	69	24	11	37	12	10	17	4	21
13	M	69	24	13	36	12	11	18	4	21
14	M	79	24	13	37	12	11	19	6	23
15	M	74	24	12	36	10	11	17	5	23
16	M	69	24	9	37	12	10	19	5	24
17	M	67	24	8	31	7	8	16	6	22
18	M	73	24	8	33	12	10	15	5	19
19	M	62	24	10	34	8	7	11	4	18
20	M	68	24	10	38	12	11	16	5	17
21	M	62	24	9	31	6	4	7	2	13
22	M	69	24	10	37	10	11	19	6	24
23	M	67	24	9	37	12	10	15	5	21
24	M	62	24	8	33	9	7	11	4	18
25	M	65	24	8	28	8	6	8	3	18
26	M	69	24	10	37	9	10	15	6	23
27	M	69	24	11	33	12	10	15	6	21
28	M	67	24	8	34	12	9	11	4	18
29	M	63	24	9	35	9	10	14	6	24
30	M	62	24	8	37	10	7	11	4	21

AAMD, ABS, Public School, Version, Part 1, Summary Answer Sheet

Institution/School Zeed Ben Alkatab Level Nonhandicapped Students Age 11³-12²
 Date of Administration March 1980

Seq. No.	Sex	Indep. Funct.	Phys. Dev.	Econo. Activ.	Lang. Dev.	Number & Time	Vocat. Activ.	Self Direc.	Respo.	Sociali-zation
1	M	72	24	12	37	12	11	16	6	23
2	M	75	24	10	38	12	8	15	4	22
3	M	74	24	13	39	12	8	12	4	19
4	M	74	24	13	37	11	6	10	3	18
5	M	76	24	13	38	12	3	8	4	18
6	M	72	24	14	35	12	10	18	6	22
7	M	76	24	12	37	12	5	7	2	15
8	M	75	24	12	38	12	10	17	6	21
9	M	78	24	13	38	12	11	17	6	21
10	M	82	24	11	39	12	7	10	3	18
11	M	75	24	12	37	12	8	15	5	20
12	M	76	24	11	39	12	10	16	5	19
13	M	75	24	11	37	12	10	16	5	24
14	M	76	24	10	36	11	11	14	5	21
15	M	74	24	13	37	10	10	15	4	19
16	M	72	24	12	37	12	8	12	3	22
17	M	73	24	11	36	12	9	13	3	20
18	M	79	24	13	36	12	7	14	2	16
19	M	74	24	12	35	12	9	13	3	18
20	M	69	24	10	37	12	8	9	3	19
21	M	77	24	13	38	12	10	15	5	21
22	M	73	24	13	37	12	11	19	5	21
23	M	75	24	13	39	12	8	11	2	15
24	M	74	24	13	39	12	8	14	4	17
25	M	76	24	13	37	12	11	17	6	22
26	M	75	24	13	37	11	8	15	4	20
27	M	72	24	10	38	12	8	13	3	17
28	M	77	24	12	39	12	10	16	5	22
29	M	72	24	11	38	12	9	15	4	20
30	M	77	24	13	38	12	9	17	6	21

AAMD, ABS, Public School, Version, Part 1, Summary Answer Sheet

Institution/School Manar, M.H.#1 & 2, & Y.M.* Level of M.R. EMR Age 11³-12²Date of Administration February & March 1980

Seq. No.	Sex	Indep. Funct.	Phys. Dev.	Econo. Activ.	Lang. Dev.	Number & Time	Vocat. Activ.	Self Direc.	Respo.	Sociali- zation
1	M	52	22	7	17	2	9	12	5	13
2	M	31	16	2	20	0	3	5	2	9
3	M	52	24	7	12	2	7	11	4	18
4	F	37	18	6	22	9	8	8	5	19
5	F	43	24	6	19	2	7	10	2	12
6	M	46	24	6	23	7	7	10	3	17
7	M	67	24	9	29	9	11	17	4	22
8	M	40	24	3	22	9	4	10	0	15
9	M	48	24	6	15	7	7	12	4	15
10	M	38	19	2	16	3	4	10	6	18
11	M	37	21	6	12	3	4	11	2	8
12	M	63	24	8	23	6	7	13	3	18
13	M	60	22	8	24	11	10	14	5	22
14	M	60	24	8	25	8	10	4	4	16
15	M	34	19	7	19	3	6	9	2	16
16	M	40	13	6	14	5	8	9	3	14
17	M	28	15	1	8	0	4	0	0	6
18	M	62	19	7	23	4	7	15	6	17
19	M	48	24	5	19	5	6	10	1	11
20	M	42	23	5	16	4	6	8	3	12
21	M	42	23	5	19	5	6	10	4	12
22	M	40	23	6	19	5	5	5	3	13
23	M	45	23	6	13	5	6	6	4	11
24	M	46	23	3	14	3	7	14	0	11
25	M	34	22	4	16	2	4	3	3	9
26	M	48	23	2	20	5	6	9	2	17
27	M	37	21	3	23	6	7	12	4	18
28	M	55	24	4	21	5	4	8	3	13
29	M	55	24	7	31	7	11	17	5	16
30	M	47	23	5	16	4	7	11	4	17

*The following sequence numbers correspond directly to their respective schools:
 1-8 Manar; 9-19 M.H. #1, 20-25 M.H. #2; and 26-30 Y.M.

AAMD, ABS, Public School, Version, Part 1, Summary Answer Sheet

Institution/School Manar, M.H.#1, Y.M.& M.H. #2 S.O.* Level of M.R. SMR Age 11³-12²Date of Administration February & March 1980

Seq. No.	Sex	Indep. Funct.	Phys. Dev.	Econo. Activ.	Lang. Dev.	Number & Time	Vocat. Activ.	Self Direc.	Respo.	Socialization
1	M	24	19	0	16	0	1	0	0	9
2	M	27	19	1	7	0	4	3	3	12
3	M	33	16	3	12	2	3	6	4	12
4	M	21	20	3	3	3	4	1	0	9
5	F	33	16	1	14	3	4	7	4	11
6	M	23	19	1	6	0	3	3	0	8
7	M	27	17	3	11	2	3	1	1	8
8	M	22	21	1	5	0	1	0	0	3
9	M	24	23	0	15	0	5	7	2	13
10	F	22	16	0	7	2	3	5	0	5
11	F	30	20	0	9	2	2	3	2	8
12	M	31	23	0	12	0	3	2	2	10
13	F	35	23	1	21	5	6	8	3	13
14	F	22	20	0	15	0	5	5	4	13
15	F	37	22	1	12	2	4	5	4	10
16	M	29	16	2	8	1	4	5	3	12
17	F	32	21	2	11	2	5	6	5	13
18	M	28	20	4	18	3	5	4	5	11
19	F	32	19	3	14	6	3	5	4	12
20	F	31	20	1	13	3	5	6	4	15
21	F	27	20	1	12	2	3	3	3	9
22	M	37	23	2	14	5	6	6	4	12
23	M	28	19	1	7	0	6	6	3	6
24	M	33	20	3	13	4	5	7	2	11
25	M	32	24	1	15	3	5	5	1	9
26	F	15	19	0	16	5	5	6	0	9
27	M	10	8	0	13	0	5	8	0	10
28	F	8	9	0	7	2	1	9	0	11
29	F	10	8	0	11	0	4	4	0	7
30	F	13	9	0	10	0	5	7	0	9

*The following sequence numbers correspond directly to their respective schools:
 1-5 Manar; 6-12 M.H. #1; 13-22 Y.M.; 23-26 M.H. #2; 27-30 S.O.

AAMD, ABS, Public School, Version, Part 1, Summary Answer Sheet

Institution/School Manar, M.H.#1, Y.M. & M.H.#2 & S.O.* Level of M.R. SMR Age 11³-12²

Date of Administration February & March 1980 (The Reliability Study)

Seq. No.	Sex	Indep. Funct.	Phys. Dev.	Econo. Activ.	Lang. Dev.	Number & Time	Vocat. Activ.	Self Direc.	Respo.	Sociali- zation
1	M	30	21	2	12	2	5	5	1	11
2	M	30	21	2	7	2	3	4	5	11
3	M	36	20	1	9	2	5	9	4	4
4	M	25	19	1	5	0	4	4	1	7
5	F	22	21	1	4	0	3	2	1	8
6	M	25	21	1	6	0	6	2	1	9
7	M	29	21	3	16	5	3	4	2	11
8	M	26	23	2	7	2	1	2	0	5
9	M	28	23	1	12	0	4	8	1	10
10	F	19	17	0	9	0	3	4	0	8
11	F	21	18	1	10	3	3	4	4	10
12	M	29	24	1	10	1	4	2	1	12
13	F	35	24	2	18	4	5	10	5	15
14	F	28	20	1	14	3	6	8	5	15
15	F	35	20	2	11	3	4	7	3	12
16	M	21	20	3	11	3	7	8	5	14
17	F	35	21	2	14	3	5	6	6	15
18	M	31	22	2	17	3	5	4	4	12
19	F	33	24	4	16	5	4	4	6	13
20	F	33	22	1	13	1	7	4	1	14
21	F	32	23	1	10	0	4	4	0	10
22	M	40	22	4	15	5	6	7	4	15
23	M	30	23	3	8	2	7	7	4	11
24	M	40	24	6	18	5	3	6	4	10
25	M	29	24	0	12	4	4	7	0	10
26	F	20	21	1	12	4	5	4	1	10
27	M	11	8	0	12	0	4	8	1	8
28	F	10	7	0	6	0	2	7	0	3
29	F	12	6	1	10	1	3	2	1	8
30	F	10	8	0	12	0	4	8	1	10

*The following sequence numbers correspond directly to their respective schools:
1-5 Manar; 6-12 M.H. #1; 13-22 Y.M.; 23-26 M.H. #2; 27-30 S.O.

APPENDIX E

Rating Confidence Levels of Teacher Responses
for Each Group (NH, EMR, and SMR)

Rating Confidence Levels of the Teachers' Responses for the Age Level 11³-12²

Item	# of "Sure" Responses	Percentage	# of "Guess" Responses	Percentage	# of "No Judgment" Responses	Percentage
1	-	-	5	100	-	-
2	-	-	5	100	-	-
3	1	20	4	80	-	-
4	1	20	4	80	-	-
5	1	20	4	80	-	-
6	1	20	4	80	-	-
7	-	-	5	100	-	-
8	1	20	4	80	-	-
9	5	100	-	-	-	-
10	5	100	-	-	-	-
11	5	100	-	-	-	-
12	5	100	-	-	-	-
13	5	100	-	-	-	-
14	5	100	-	-	-	-
15	5	100	-	-	-	-
16	5	100	-	-	-	-
17	1	20	4	80	-	-
18	5	100	-	-	-	-
19	5	100	-	-	-	-
20	5	100	-	-	-	-
21	5	100	-	-	-	-
22	5	100	-	-	-	-
23	5	100	-	-	-	-
24	5	100	-	-	-	-
25	5	100	-	-	-	-
26	1	20	4	80	-	-
27	5	100	-	-	-	-
28	5	100	-	-	-	-
29	5	100	-	-	-	-
30	5	100	-	-	-	-
31	5	100	-	-	-	-
32	5	100	-	-	-	-
33	5	100	-	-	-	-
34	5	100	-	-	-	-
35	5	100	-	-	-	-
36	5	100	-	-	-	-
37	5	100	-	-	-	-
38	5	100	-	-	-	-
39	5	100	-	-	-	-
40	1	20	4	80	-	-
41	1	20	4	80	-	-
42	3	60	2	40	-	-
43	2	40	3	60	-	-
44	3	60	2	40	-	-
45	3	60	2	40	-	-
46	5	100	-	-	-	-
47	1	20	4	80	-	-
48	5	100	-	-	-	-
49	4	80	1	20	-	-
50	5	100	-	-	-	-
51	4	100	1	20	-	-
52	5	100	-	-	-	-
53	5	100	-	-	-	-
54	4	80	1	20	-	-
55	5	100	-	-	-	-
56	5	100	-	-	-	-

Rating Confidence Levels of the Teachers' Responses for the SMR Group

Item	# of "Sure" Responses	Percentage	# of "Guess" Responses	Percentage	# of "No Judgment" Responses	Percentage
1	5	100	-	-	-	-
2	1	20	4	80	-	-
3	5	100	-	-	-	-
4	5	100	-	-	-	-
5	5	100	-	-	-	-
6	5	100	-	-	-	-
7	-	-	5	100	-	-
8	4	80	1	20	-	-
9	5	100	-	-	-	-
10	2	40	3	60	-	-
11	5	100	-	-	-	-
12	5	100	-	-	-	-
13	5	100	-	-	-	-
14	5	100	-	-	-	-
15	4	80	1	20	-	-
16	4	80	1	20	-	-
17	4	80	1	20	-	-
18	5	100	-	-	-	-
19	5	100	-	-	-	-
20	5	100	-	-	-	-
21	5	100	-	-	-	-
22	5	100	-	-	-	-
23	5	100	-	-	-	-
24	5	100	-	-	-	-
25	5	100	-	-	-	-
26	5	100	-	-	-	-
27	5	100	-	-	-	-
28	5	100	-	-	-	-
29	5	100	-	-	-	-
30	5	100	-	-	-	-
31	5	100	-	-	-	-
32	5	100	-	-	-	-
33	5	100	-	-	-	-
34	5	100	-	-	-	-
35	5	100	-	-	-	-
36	5	100	-	-	-	-
37	5	100	-	-	-	-
38	5	100	-	-	-	-
39	5	100	-	-	-	-
40	4	80	1	20	-	-
41	5	100	-	-	-	-
42	1	20	4	80	-	-
43	5	100	-	-	-	-
44	5	100	-	-	-	-
45	5	100	-	-	-	-
46	5	100	-	-	-	-
47	5	100	-	-	-	-
48	5	100	-	-	-	-
49	5	100	-	-	-	-
50	5	100	-	-	-	-
51	5	100	-	-	-	-
52	5	100	-	-	-	-
53	5	100	-	-	-	-
54	5	100	-	-	-	-
55	5	100	-	-	-	-
56	5	100	-	-	-	-

LIST OF REFERENCES

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- American Association on Mental Deficiency. Testing materials. Washington, D. C.: Author, 1979. (Brochure)
- Adas, A. Fundamental statistics in education and psychology. Amman, Jordan: Alaksa Library, 1972.
- Balthazar, E., Roseen, D., & English, G. The central Wisconsin colony scales of adaptive behavior: Ambulant battery. Madison, Wisconsin: State Department of Administration, 1968.
- Bennett, F. A. Levels of community residential living and its relationship to adaptive behavior among trainable mentally retarded adults. Unpublished doctoral dissertation, Ohio State University, 1975.
- Berkowitz, A. History of the AAMD. Washington, D. C.: AAMD, 1979. (Brochure)
- Bhattacharya, S. Adaptive behavior scale refinement. Journal of Mental Retardation, February 1973, 27.
- Bloom, L., and Lahey, M. Language development and language disorders. New York: John Wiley & Sons, 1978.
- Bogen, D., and Aanes, D. Adaptive behavior as a tool in comprehensive MR programming. Mental Retardation, 1975, 13(1), 38-41.
- Borg, W., and Gall, M. Educational research (2nd ed.). New York and London: Longman, 1971.
- Brislin, R. Back-translation for cross-cultural research. Journal of Cross-Cultural Psychology, September 1970, 1(3), 185-216.
- Christian Reformed World Relief Committee. CRWRC study of the prevalence of handicapped and projected numbers of handicapped in Jordan for 1975, 1980 and 1985. Unpublished study, Amman, Jordan, 1975.
- Clausen, J. The continuing problem of defining mental deficiency. The Journal of Special Education, 1972, 6(1), 97-106.

- Congdon, D. The adaptive behavior scales modified for the profoundly retarded. Mental Retardation, February 1973, 20-21.
- Coulter, W., and Morrow, H. Requiring adaptive behavior measurement. CEC: Exceptional Children, October 1978.
- Doll, E. A. A manual for the Vineland Social Maturity Scale: The measurement of social competence. Minneapolis: Educational Testing Bureau, 1953.
- Elghatit, Z. Adaptive behavior project: Annual report, FY 1974-1975 and Annotated bibliography on adaptive behavior. Columbus, Ohio: Ohio State University, 1975.
- Fink, R. Interviewer training and supervision in a survey of Laas. International Social Science Journal, 1963, 15, 21-34.
- Foster, R., and Nihira, K. Adaptive behavior as a measure of psychiatric impairment. The American Journal of Mental Deficiency, 1969, 74(3), 401-404.
- Gardner, J. and Giampa, F. Utility of three behavioral indices for studying severely and profoundly retarded children. American Journal of Mental Deficiency, 1971, 76(3), 352-356.
- Grossman, H. Manual on terminology and classification in mental retardation (Special Publication No. 2). Washington, D. C.: AAMD, 1977.
- Gunzburg, H. C. The Progress Assessment Chart of Social Development. Birmingham: SEFA Publications Ltd., 1963 and London: National Association for Mental Health, 1965.
- Haddad, Y., Zohbe, R. and Alali, N. Preliminary standardization of the Stanford-Binet for the Jordanian population. Amman, Jordan: Center for Tests and Measurement, College of Education, Jordan University, 1977.
- Hallahan, D. and Kauffman, J. Exceptional children. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1978.
- Isett, R. and Spreatt, S. Test-retest and interrater reliability of the AAMD Adaptive Behavior Scale. The American Journal of Mental Deficiency, 1979, 84(1), 93-95.

- Jordan, Department of Social Affairs. Programs of the Department of Social Affairs. Amman, Jordan: 1979. (Brochure)
- Kadzin, A. Behavior modification in applied settings (Rev. ed.). Homewood, Illinois: The Dorsey Press, 1980.
- Kok, P. A survey of the handicapped in the Irbed governorate of Jordan. Amman, Jordan: 1976.
- Kok, P. A study of the institutions serving the handicapped in Jordan. Amman, Jordan: 1978.
- Lambert, N., Windmiller, M., Cole, L., & Figueroa, R. AAMD Adaptive Behavior Scale, Public School Version: Manual (1974 revision). Washington, D. C.: AAMD, 1975.
- Leland, H. Adaptive behavior and mentally retarded behavior. In C. E. Meyers, R. K. Eyman & B. Tarjan (Eds.), Socio-behavioral studies in mental retardation. Washington, D. C.: AAMD, 1973.
- Leland, H. Theoretical consideration of adaptive behavior. In W. A. Coulter and H. W. Morrow (Eds.), The concept and measurement of adaptive behavior within the scope of psychological assessment. Austin, Texas: Regional Resource Center, 1977.
- Leland, H., Shellhaas, M., Nihira, K., & Foster, R. Adaptive behavior: A new dimension in classification of the mentally retarded. Mental Retardation Abstracts, November 1967, 4(3), 359-587. (Abstract)
- Leland, H., Shoaee, M., & Vayda, S. Guidelines for the use of the AAMD Adaptive Behavior Scale. Columbus, Ohio: Nisonger Center, Ohio State University, 1975.
- Leon, L. T. Adaptive Behavior Checklist (ABCL). Paper presented at the 54th Annual International Convention of the Council for Exceptional Children, Chicago, Illinois, 4-9 April 1976. (ERIC Document Reproduction Service No. ED 122 523)
- Magerotte, G. Assessment of adaptive behavior in Belgian special schools. In P. Mittler (Ed.), Research to practice in mental retardation: Education and training. (Vol. 11). Londong & Tokyo: University Park Press, 1977.
- Malone, R., & Christian, W. P. Adaptive behavior scales as a screening measure for special education placement. The American Journal of Mental Deficiency, 1974, 79(4), 367-371.

- Mental Health Association. Brochure. Amman, Jordan: Author, 1977.
- Nental Health Association. Programs of the Mental Health Association. Amman, Jordan: Author, 1979. (Booklet)
- Mielzarek, R. H., & Mielzarek, L. A. The use of the Adaptive Behavior Scale in a development center in evaluation and treatment for placement in public schools. Paper presented to the AAMD, Toronto, June 1974.
- Miller, G., and Beebe-Center, J. Some psychological methods for evaluating the quality of translation. Mechanical Translation, 1956, 3, 73-80.
- National Association for the Mentally Handicapped. Brochure. Amman, Jordan: 1980.
- Nie, N., Hull, C., Jenkins, J., Steinbrenner, K., & Bent, D. Statistical Package for the Social Sciences (2nd ed.). New York: McGraw Hill Book Company, 1975.
- Nihira, K. Factorial dimensions of adaptive behavior in mentally retarded children and adolescents. The American Journal on Mental Deficiency, 1969, 74(1), 130-141.
- Nihira, K. Pearson clusters on two dimensions of adaptive behavior. Proceedings of the 78th Annual Convention of the American Psychological Association, 1970, 5(2), 715-716.
- Nihira, K. Environmental expectations and adaptive behavior. Proceedings of the 79th Annual Convention of the American Psychological Association, 1971, 6(2), 619-620.
- Nihira, K. Personal letter to the researcher. 1979.
- Nihira, K., Foster, R., Shellhaas, M., & Leland, H. Adaptive Behavior Scale: Manual. Washington, D. C.: AAMD, 1969.
- Nihira, K. & Nihira, L. Normalized behavior in community placement. Journal of Mental Retardation, April 1975, 9-13.
- Nihira, K. & Shellhaas, M. Study of adaptive behavior: Its rationale, method, and implications in retardation programs. Journal of Mental Retardation, 1970, 8, 11-16.
- Phillips, H. P. Problems of translation and meaning in field work. Human Organization, 1959-1960, 18, 184-192.

- Piaget, J. The origins of intelligence in children. New York: International Universities Press, 1952.
- Reyes, B. E. A Spanish version of the AAMD Adaptive Behavior Scale (Puerto Rico). Unpublished thesis, Ohio State University, 1978.
- Robert, A., Leslie, A., Levine, H., Martin, N., & Leoffler, F. Adaptive behavioral assessment as the second tool criteria for mental retardation. Psychological Abstracts, July-December 1977, 58. (Abstract)
- Secherest, L., Fay, T., and Zaidi, S. Problems of translation in cross-cultural research. Journal of Cross-Cultural Psychology, March 1972, 3(1), 41-56.
- Smadi, J., Break, W., and Qaryouti, Y. Preliminary standardization of the Wechsler Adult/Children Intelligence Scale (WAIS/WISC) for Jordanian populations. Amman, Jordan: Center for Tests and Measurement, Faculty of Education, Jordan University, 1979-1980.
- Swedish Organization for Individual Relief. Mentally Retarded Programs. Amman, Jordan: Author, 1979. (Booklet)
- Taylor, J. R. A comparison of the adaptive behavior of retarded individuals successfully and nonsuccessfully placed in group living homes: 1973. Dissertation Abstracts International, April 1974, 34, 6489A. (Abstract)
- Tomiyasu, Y. Measurement of adaptive behavior in Japan. In P. Mittler (Ed.), Research to practice in mental retardation: Education and training (Vol. 11). Baltimore, London, & Tokyo: University Park Press, 1977.
- United States, President's Committee on Mental Retardation. The Six-Hour Retarded Child. Washington, D. C.: U. S. Government Printing Office, 1970.
- Upadhyaya, S. Adaptive behavior concepts and trends in India. In P. Mittler (Ed.), Research to practice in mental retardation: Education and training (Vol. 11). Baltimore, London, & Tokyo: University Park Press, 1977.
- Werner, O., & Campbell, D. T. Translating, working through interpreters, and the problem of decentering. In R. Naroll & R. Cohen (Eds.), A handbook of methods in cultural anthropology. New York: Columbia University Press, 1973.

Wilson, J. B. Is the term 'adaptive behavior' educationally relevant? The Journal of Special Education, 1972, 6(1), 93-95.

Young Women's Muslim Association. Pamphlet. Amman, Jordan; Author, 1980.