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THE ADAPTIVE BEHAVIOR SCALE:
A CORRELATION STUDY
AT A RESIDENTIAL TREATMENT FACILITY

by
Simone Bey

A THESIS

Submitted in partial fulfillment of the requirements of the
Master of Arts Degree in the Graduate Division
of Rowan College of New Jersey
May 1996

Approved by

John Klanderman, Ph.D.

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5/7/96

ABSTRACT

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The Adaptive Behavior Scale:
A Correlation Study
At a Residential Treatment Facility
1996
Dr. John W. Klanderma
Graduate Program of School Psychology

The purpose of this study is to examine correlation of scores on the American Association on Mental Retardation Adaptive Behavior Scale-School Second Edition (ABS-SE.2) across two settings. The sample consisted of thirteen males and seventeen females who participate in a Behavior Disorders program. It was hypothesized that scores would be significant at the .05 level ($p < .05$). Previous research on adaptive behavior scales has resulted in mixed findings. Partially this is due to problems and differences in methodology. First, there are four versions and editions of the AAMR Adaptive Behavior Scales that have been utilized in research within the last twenty years. Second, differences in sample variations affected these results. For example, subjects were included with a range of intellectual functioning (severe to normal) and classification (e.g., conduct disorder). Further, correlation between settings (school and home) in previous research had ranged from low to high. About half of the studies reviewed indicated significant correlation between parent and teacher scores. The other half indicated an insignificant relationship between these scores. Score correlations were computed with the Pearson product moment correlation coefficient (r). The results indicate significant correlations on seven Domains. Also, residential counselors rated subjects higher on six Part Two Domains.

MINI-ABSTRACT

Simone Bey
The Adaptive Behavior Scale:
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The purpose of this study is to provide information about score correlations on the Adaptive Behavior Scale-School Second Edition in the residence and school at a residential treatment facility. The results indicate significant correlations on seven Domains. Also, residential counselors rated subjects higher on six Part Two Domains.

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CHAPTER I

Need

This topic was selected for several reasons. First, the researcher has worked with developmental disabled children, adolescents, and adults for the last twelve years. However, until the last nine months there was no exposure to individuals with dual diagnosis, behavior disorders and mental retardation. There was even less exposure to measurements of their adaptive behaviors. Second, there is a litany of research about adaptive behavior and how it relates to the mentally retarded and behavior disorder populations, but there is limited research available on adaptive behaviors and individuals with dual diagnosis. Further, literature is more limited with subjects in residential treatment facilities. Finally, there is a need to provide information about reliability across settings with this population. This is especially true in residential settings where the primary caregivers are teachers and residential counselors.

Purpose

The purpose of this study is to provide information about the relationship of scores measuring students' adaptive behaviors of students residing at a residential treatment facility. Specifically, the researcher will provide information about rater reliability between two settings. The measurement tool for this research is the 1993 edition of the American Association on Mental Retardation's (AAMR) Adaptive Behavior Scale-School Second Edition (ABS-SE:2). Through the use of this scale, information is provided regarding the student's adaptive behaviors and the reliability of the scores across settings.

Subjects for this study are students between the ages of twelve years and seventeen years and eleven months. Profile charts are provided for the sample consisting of age, length of placement, gender, Intelligence Quotient (IQ), and psychotropic medications.

Hypothesis

The following hypothesis is predicted in this study: there will be significant reliability across settings at the .05 level between the residential counselors and the teachers' scores. It is assumed that the full-time residential counselors are the primary caregiver. Therefore, this individual acts as a "substitute parent".

Background

Assessment of adaptive behavior has been recognized as an important aspect of individual psychological assessment for over a century. Precedence was established in 1983 when Voisin developed the first recorded measurement of adaptive behavior. Voisins' work identified how well individuals with mental impairments cope with natural and social demands in their environment. After that time, researchers began replicating Voisins' work by developing other measurements of adaptive behavior. The American Association on Mental Deficiency (AAMD), currently the American Association on Mental Retardation (AAMR), was the first to develop a measurement for diagnosis and classification in the public school. This scale was known as the Adaptive Behavior Scale-Public School Version (ABS-PSV; Nihira, Foster, Shellhaas, & Leland, 1969). Numerous versions of this scale were developed over the years.

During the development of the 1975 and the 1981 versions of the ABS, information was not available to compare its item contents with other adaptive behavior

scales. Therefore, content validity was based on data displaying differences in the adaptive behavior functioning of children classified as trainable and educable mentally retarded. This was compared to children in the regular classrooms. Since 1980, many tests measuring adaptive behavior were developed. This generated research about the reliability and validity of the 1975, 1981, and the current 1993 versions of the AAMR Adaptive Behavior Scales.

The current study is based on a theory developed by the American Association on Mental Retardation's Diagnosis, Classification, and System of Supports (Luckasson et al., 1992). It identified ten adaptive areas which are critical to the diagnosis of mental retardation. They were communication, self-care, home living, social skills, community use, self-direction, health and safety, functional academics, leisure, and work. Diagnosis of a deficiency in two of these adaptive areas is one of the critical steps in classification of mental retardation. The other diagnostic aspects are an onset prior to the age of eighteen and an intelligence quotient (IQ) of 70-75 or below. Mental retardation may be related to socially deprived environmental factors and/or organic factors. Therefore, it is critical that mal-adaptive behaviors are identified and incorporated into the students' treatment plan. At the residential treatment facility utilized in this research, treatment plans are based on assessments conducted by residential counselors and teachers. Then, the results are reviewed by the clinician. Hence, it is important that the reliability across raters and settings is established. In addition, Adaptive Behavior Scales can be used to measure the effectiveness of an intervention.

Definitions

Adaptive Behaviors: the coping mechanisms of an individual in handling his or her environment.

Behavior Disorders: any student with a diagnosis of conduct disorder, oppositional defiant disorder, and other behavioral/emotional disorders.

Dual Diagnosis: students who have a diagnosis of behavior disorder and are cognitively functioning in a mentally deficient range.

Primary Caregiver: an adult who spends the most time with the student in his home. This may include a biological parent, foster parent, or guardian.

Residential Counselor: full-time, second shift (3:00 p.m. - 11:00 p.m.) staff. This staff primarily works in the residence.

Student: a child, between the ages of twelve and eighteen, who is residentially placed at the facility in this study.

Assumptions

The researcher is making the following assumptions:

1. The scale was completed and scored according to the AAMR ABS-S.2 EXAMINERS' MANUAL.
2. Information provided in these ratings is accurate.
3. Residential counselors and teachers have received the same training and orientation within the residential treatment facility (e.g., Effective Communication).
4. Residential counselors assume the role of a parent or guardian, hence the term "substitute parent".

5. The 1993 ABS-SE:2 is comparable to the 1981 ABS-SE.

Limitations

1. This research is limited to the sample descriptors. Therefore, the results may not be generalized to other samples.
2. The sample size is small.
3. There is limited availability of data with this sample within the residential treatment facility.
4. In some instances, previous ABS-SE:2's have been completed within the last four months.

Overview

In CHAPTER TWO, literature basis for this research is reviewed. Specifically, this will include literature pertaining to reliability across settings and raters. In these articles various forms of Adaptive Behavior Scales are utilized. In CHAPTER THREE, design and methodology of the study will be described. Specifically, it will include descriptions of the sample, measurement, design, testable hypothesis, and analysis. In CHAPTER FOUR, analysis of data will be discussed. Also, this chapter includes the order of the presentation, organization of the analysis chapter, restatement of the hypothesis, interpretation of the results, and statements of significance. In CHAPTER FIVE, the researcher will discuss summary and conclusion. Also, this section contains a review of the results and implications for future research.

CHAPTER II

Literature reviews are presented in this chapter. The focus is on previous versions of the Adaptive Behavior Scales as developed by the American Association on Mental Deficiency as well as other behavior rating scales. Specifically, these studies will focus on criterion validity, test-retest reliability, and inter-rater reliability. Unfortunately, research on the 1993 Adaptive Behavior Scale used in this research is not available. The assumption is that the current version is too new for accessibility through published research. This review has four objectives. The first is to provide brief summaries of literature regarding the validity and reliability of the AAMR Adaptive Behavior Scales. The second is to review studies extensively that discuss across setting and inter-rater reliability with behavior rating scales. The third purpose is to briefly review other literature which relates indirectly to this research topic. The fourth purpose is to present concluding statements of these studies and to provide summary and implications of the findings on Chapter Three.

Part I: A Review of Research on Validity and Reliability of the AAMR Adaptive Behavior Scales

Adaptive behavior has been defined by Grossman (1977; cited by Cheramie, 1990) as "the effectiveness or degree with which an individual meets the standards of personal independence and social responsibility expected for age and cultural group." Since the 1970's, adaptive behavior has been considered a key component in the diagnosis of mental retardation. Further, adaptive behavior measurements are used as diagnostic tools to aide in the classification of specific psychopathological diagnosis, identification of

maladaptive behaviors, and to measure the effectiveness of treatment programs. During the last three decades, scales measuring various aspects of adaptive behavior have been developed. According to Myers et al. (1979; cited by Salagaras and Nettelbeck, 1983), "the AAMR Adaptive Behavior Scale (1974) is currently the most widely used instrument, has the broadest set of norms, and samples the widest range of both adaptive and maladaptive behavior." Since the ABS plays such an important role, it is imperative to review literature regarding its criterion validity and reliability for use among school-age subjects. The first study by Cheramie and Edwards (1990) examines criterion validity of the Adaptive Behavior Scale-School Edition, Part Two. The second study by Salagaras and Nettelbeck (1983) investigates reliability and criterion validity of the ABS.

Review: The AAMR ABS-SE, Part Two: Criterion-Related Validity in a Behavior-Disordered Sample In Cheramie and Edwards' 1990 study they researched the diagnostic validity of Part Two of the ABS-SE for the classification of behavior-disordered (BD) children. Their sample consisted of 66 elementary school students ranging in age from 7-0 through 12-11. There were three subject age groups: (1) children classified BD; (2) children referred for behavior problems, but not classified; and (3) children in regular classrooms, neither referred nor classified (Cheramie and Edwards, 1990). Teachers completed Part Two of the ABS-SE for all subjects. This study investigated validity for both domain and factor scores with discriminant analyses. Previous research establishes the efficiency of the AAMR Scale in discriminating between non-mentally retarded and retarded individuals. Unfortunately, most of the diagnosis is in Part One of the scale which is "organized along developmental lines and consists of and

domains designed to measure self-help cognitive skills" (Cheranie and Edwards, 1990). Research is scarce on criterion validity of Part Two of the ABS which measures social and emotional adaptation. There is even less research that addresses validity of the ABS with non-mentally retarded behavioral disorder students. According to Lambert (1981), the ABS is "a behavior rating scale for mentally retarded, emotionally maladjusted, and developmentally disabled individuals, but can be used with other disabled persons as well." This study investigated the use of the ABS-SE with a public-school non-mentally retarded sample. Specifically, it investigated diagnostic validity of Part Two of the ABS-SE in the classification of behavior-disordered children.

Correlation between the initial and second (test-retest) teacher ratings indicated stability of the ABS-SE Part Two across time. This indication of test-retest reliability is consistent with previous literature on the AAMR scale (Cheranie and Edwards, 1990). Further, this study indicates the ABS-SE maintains criterion validity with respect to the classification of BD students. Overall the classification results of both domain and factor scores are significant. "Using domain scores generated by stepwise discriminant analysis, the overall rate of correct classification was 71.21%; using factor scores, the level of correct classification increased to 77.27%. The authors caution the reader to remember this is the first study to apply the ABS-SE Part Two to a BD sample for the purposes of investigating diagnostic validity. Therefore, the results should be reviewed with caution. Also, the authors indicate the need for replication of this study to determine generability of the results. Further, the authors stress the importance of correcting the major limitations in this study. One limitation is the time lapse between the initial referral and data

collection. Other limitations included a small sample size and intergroup ratings by the same teacher. The authors recommend using Part Two of the ABS-SE as a short form. It could be used in initial screening for students suspected of emotional disturbance.

Review: Adaptive Behavior of Mentally Retarded Adolescents Attending School

In Salagaras and Nettelbeck's (1983) study, the sample consisted of 550 mentally retarded adolescents attending special schools. This study reviewed teacher ratings of the 1981 AAMR ABS, while considering the following variables: age, sex, estimated intellectual ability, etiology, place of living, the presence or absences of any mobility disability, and use of medications. Salagaras and Nettelbeck (1983) examined inter-rater reliability.

Specifically, two teachers within each of the eight schools rated students independently.

The mean age for these students was 15.6 years. The pearson product-moment correlation coefficient, r is used for Part One. For Part Two the Phi coefficient was used "since score distributions for all domains were of limited range and severely positively skewed" (Salagaras and Nettelbeck, 1983). The mean reliability for Part One was .80, which compares favorably with .86 reported in the ABS manual. The range is from .72 to .87. Reliabilities for Part Two are lower. According to the authors this was "probably reflecting the sensitivity of many types of maladaptive behavior to any interpersonal relationship existing between the rater and the person being rated, whereas the adaptive behavior measured in Part One of the scale is less likely to be affected in this way."

(Salaragas and Nettelbeck, 1983). The mean reliability for Part Two is .52. Again, this is favorable to the .57 reported in the manual. The Reliabilities range from .36 to .78.

The authors also examined criterion validity of both parts of the scale.

"Multi variate analyses of variance between four categories of adaptive behavior as judged by the teachers (i.e., mild, moderate, severe, or profound retardation) and the ABS scores establish significant results for both parts of the scale." (Salagaras and Nettelbeck, 1983) Next, cause of these overall relationships was determined from univariate analysis of variance between the categories used in each Part One and Part Two domain. The results were highly significant, at the .01 level for six of the Part Two domains. For two domains, the significance was weaker at the .05 level. "Taken together, these results confirm the criterion validity of the ABS with mentally retarded students are significant; however, six Part Two domains did not discriminate among the four categories of adaptive behavior, as judged by the teachers." (Salagaras and Nettelbeck, 1983) Overall, the results clearly indicated the applicability, reliability, and validity of the ABS for use with school-age mentally retarded students. Also, the authors indicate Part One may be more useful than Part Two for this population.

In summary, the previous articles findings suggest that the 1981 AAMR ABS and ABS-SE have significant test-retest reliability and criterion validity with school-age children with both mentally retarded and their non-mentally retarded peers. Further, both studies conclude that Part One of the ABS is more developmentally based. Therefore, it is more appropriate for use in the differentiation of mentally retarded and non-mentally retarded school-age students. In addition, Part Two of the ABS is a measure of social-emotional functioning and adaptation. Therefore, its use is more appropriate as an initial screening for the possibility of emotional and/or behavioral disturbances.

In the next section, literature reviews are provided as they specifically relate to across

setting, inter-rater, and test-retest reliability of the AAMR Adaptive Behavior Scales.

Part Two: A Research Review of Inter-rater Reliability and Intra-rater Reliability on the AAMR Adaptive Behavior Scales

This section focuses on research that closely resembles the current research project. This includes a description of methods, results, strengths and weaknesses of the literature. Finally, the implications for these studies and how they compare to the current project are discussed.

Review: The AAMR Adaptive Behavior Scale-School Edition, Part Two: Test-Retest Reliability and Parent-Teacher Agreement in a Behavior Disordered Sample

The purpose of this research was to investigate reliability and parent-teacher agreement on the 1981 version of the ABS-SE, Part Two. Specifically, Cheramie (1994) suggested the need for research on this part of the scale with Behavior Disordered (BD) non-mentally retarded children. The total sample consisted of sixty-six elementary school students between the ages of 7-0 through 12-11. This sample was divided into three groups. Group 1 consisted of 26 students classified as Behavior Disordered. Group 2 consisted of 20 students who had been referred for pupil appraisal for behavior problems. Group 3 consisted of 20 students who were enrolled in regular classes and had not been referred. The latter are the control group. Within this original sample of 66 students, 20 students were randomly sampled for a test-retest group.

The description of methodology is as follows. The mean test-retest time interval was three weeks with a range of two to four weeks. Pearson r 's were calculated on the initial and retest ratings. All values were significant at the .05 level and range from .63 to .99,

with a mean correlation of .83. According to Cheraime (1994),

To investigate teacher differences in the initial and retest ratings, means were generated for each domain score and analyzed with dependent *t* tests. For each domain, the mean of the second rating was lower than the mean of the initial rating. Significance was obtained on five domains: Antisocial vs. Social Behavior, Rebelliousness, Appropriateness of Interpersonal Manners, Acceptability of Vocal Habits, and Symptomatic Behavior.

Parent-teacher agreement was estimated for the BD group ($n=25$). Pearson *r*'s were calculated for each domain score. All correlations were low with a range from .04 to .52, with a mean *r* of .20. Only two of the coefficients were significant, Trustworthiness with an *r* of .52 which is significant at the .01 level. The second one is Acceptability of Habits with a correlation of .40, which is significant at the .05 level. Then "to assess the differences more between parents' and teachers' ratings, means were generated for each domain score and analyzed by dependent *t* tests." (Cheraime, 1994). According to the results, teachers rated students higher on six domains; however, they did not reach significance. Also, parents rate students higher on five domains, with one of the mean differences reaching significance, Symptomatic Behavior. According to (Cheraime 1994), these results were similar to previous results obtained with other behavior rating scales with this sample type. The question is whether the low correlations between parent-teacher ratings represent bias or reflect valid differences in behavior caused by situational specificity. Further, Cheraime (1994) said that parents often lack direct knowledge of their child's performance in structured and unstructured group activities. Also, teachers often lack direct knowledge of students more personal behaviors and interactions with

siblings. The scale is designed to be comprehensive and measure all of these behaviors. Therefore, Cheraie speculated that any differences were more likely caused by setting and situational behaviors instead of rater bias.

According to Cheraie (1994), major limitations of this study are small sample size and time elapse between initial ratings and classification of students in the Behavior Disordered group (16 weeks). The author indicated the need for additional research using the scale with non-mentally retarded subjects. Further, as Cheraie (1994) indicates there are many forms of the ABS; therefore, it is difficult to compare findings. Unfortunately, there is little research with behavior disorder subjects, both with and without mental deficiencies. Another weakness is the lack of control over the rater's previous exposure to the ABS. The problem is not so much practice effect as it is the possibility of raters remembering previous item scores. However, it is still possible that differences in ratings could, in part, be due to teachers having more familiarity with the scale.

This study has two major strengths. First, it is a pioneer project that investigates test-retest reliability and parent-teacher correlations with behavior disordered children. Second, Cheraie (1994) met with each parent and teacher individually and administered the scale via first party method. During the course of this literary review, it was noted that many researchers reviewed the instructions in group format. Or, they were not present when the scale was completed, thereby reducing the reliability of the rater completing the scale. This is especially true for teachers or aides who may feel pressured to perform and seek additional opinions or help in completing the scale.

Review: Comparisons of Parent and Teacher Ratings of Adaptive Behavior of Children with Mental Retardation In this study Foster-Gaitskell and Pratt (1989) administered the 1981 ABS-SE to 22 parents and 22 teachers of school-age mentally retarded (IQ range between 55 - 70) children using third party assessment. The overall purpose of this study was to compare parent-teacher ratings and to consider the difficulties and their reason for rating certain items. Further, this study reviewed the need to compare ratings of particular behaviors for individual children.

This research has different conclusions than previous research in this area (e.g., Mayfield et al., 1984). "Our findings suggest that when the method of administration and familiarity with the instrument are controlled, parents' and teachers' ratings are not significantly different." (Foster-Gaitskell & Pratt, 1989) With regards to the findings on items that are difficult to rate, there was considerable overlap between the two groups. This was especially true on Factor 2, "Where differences did exist and they reflect the differing amount of opportunity that teachers and parents had to observe skills." (Foster-Gaitskell & Pratt, 1989). For example, teachers identified items from Factor 1 which are concerned with bathing and putting on shoes as difficult to rate. However, parents did not have difficulty in rating these items. Similarly, four items from Factor 3 (Personal-Social Responsibility) are identified as difficult for parents to rate, but not for teachers. Again, the authors contend that difficulty in rating these items developed because parents do not observe these behaviors. It is interesting that although the overall emphasis in this version of the scale is on personal skills, teachers do not identify more items difficult to rate than parents do. Foster-Gaitskell & Pratt (1989), indicated this may be true for this particular

sample because this school places emphasizes daily living skills instead of academics. Therefore, teachers in this sample may have an abnormal amount of exposure to daily living skills. Also, at the individual level, the findings indicate that "even though there were no significant overall differences, it may still be important to consider both parent and teacher ratings." (Foster-Gaitskell & Pratt, 1989). This is especially true for the ABS-SE when it is used for classification.

This study has several limitations when applied to the current research project. First, research limitations are not listed by the authors. Second, Foster-Gaitskell & Pratt, (1989) do not control for familiarity, or lack of familiarity, with the scale. If they controlled for this variable, then it was not indicated. Third, the scale was administered using third party method to parents and teachers. Finally, it was questionable if a researcher or an unbiased observer was present to ensure rating reliability.

There are positive aspects of this research when compared to the current study. First, the parent who spends the most amounts of time with the subject was selected. This was preferable to randomly selecting a parent. Therefore, you are assured that parents in this study have significant observations of the subjects' behavior. Second, the authors ensured that parents and teachers were familiar with the instrument by reviewing it individually with each rater. Third, Cheramie (1994) questions the assumption made by previous researchers that parents and teachers rate children similarly on adaptive behavior. Further, she questions the assumption that mildly retarded children function the same at school as they do at home. As stated in previous research, (Cheramie, 1994 & Salagaras & Nettelbeck, 1983) findings related to the reliability of the AAMR Adaptive Behavior

Scale ratings must be reviewed with caution, because of differences in methodology, sample variations, and different versions of the ABS. Therefore, it is difficult to develop definitive conclusions.

Review: Reliability of the AAMR Adaptive Behavior Scale-Public School

Version In this 1984 study Mayfield et al., examined across setting reliability and test-retest reliability (time = two weeks) of the 1975 AAMR Adaptive Behavior Scale, Public School Version (ABS-PSV; Mayfield, Forman, and Nagle, 1984). Thirty-one children who were enrolled in resource classrooms for the educable mentally disabled were rated by parents, special education teachers, regular classroom teacher, and an independent rater (psychology intern). The ABS-PSV closely resembles the ABS-SE:2 used in the current study. Actually, the ABS-PSV is derived from the ABS (Nihira, Foster, Shellhaas, & Leland, 1974).

According to the results, the type of rater may have a significant influence on the adaptive behavior assessment of educable mentally retarded children. In general, special education teachers' ratings were lower than other raters. This was significant on four domains: Independent Functioning, Language Development, Socialization, and Economic Activity. On the other hand, regular classroom teachers and parents have relatively higher ratings. "It is likely that differences in the ratings may be due to actual behavioral variations in the child, rather than rater bias or error." (Mayfield et al., 1984) In other words, the child's behavior may be environmentally specific. According to the authors, differences in ratings may be attributed to one or more of the following: (1) varying familiarity with the assessment instrument; (2) varying amounts of observation time; (3)

biases resulting from experience with different reference groups; (4) biases resulting from nature of the relationship with the child; (5) varying perceptions of the value of the behaviors; and (6) actual variations in the child's behavior.

Test-retest reliability coefficients for all rater groups were fairly high. The mean correlation coefficients were .91 for parents, .76 for regular classroom teachers, and .85 for special classroom teachers. "Thus the ABS-PSV is relatively stable over time for all raters, with parents having the most stable ratings." (Mayfield et al., 1984) These differences in correlations may be due to the differences in rating groups' opportunity to observe the student. For example, parents are involved with their children on a regular basis in a low ratio situation. On the other hand, regular classroom teachers typically have higher ratios; therefore, they have fewer opportunities to observe individual students' behaviors. Further, as Mayfield et al. (1984) speculate, special education teachers are typically more aware of maladaptive behaviors and are more apt to cue into their occurrence. Possibly, this is why their test-retest correlations are slightly closer to the parents.

There are several strengths and limitations noted in this article. The strengths are discussed first. This is one of few articles which address a variety of raters and compares special education and regular education teachers. Also, Mayfield et al. include reliability across settings and test-retest reliability. Test-retest reliability is important in determining stability in raters over time. This research also has limitations. First, test-retest correlations are not indicated for the independent observer. Further, information about this individual was very limited and the little provided was not a positive. In addition, this

individual only observed the child on one occasion for three hours. It is questionable whether this was sufficient exposure to the students behavior patterns. Another weakness was that only the mothers ratings are included. There is research that questions the differences in ratings between the father and mother (e.g., Lindholm & Toulliatos, 1982) and other researchers indicate the need to select the parent who spends the most time with the child (e.g., Foster-Gaitskell & Pratt). Is this study assuming that the mother spends the most time with the subject? No conclusion can be drawn with the information provided.

Part III: Review of Literature About Inter-rater Reliability and Comparison Validity of the AAMR ABS When Compared to Other Behavior Scales

In this section additional literature that examines reliability and validity of the ABS as well as other behavior rating scales was reviewed. Also included were articles that discussed across setting and test-retest reliability with other behavior rating scales and samples. These samples included children who were moderately retarded, severely retarded, learning disabled, slow learners, autistic, and referred for counseling for behavior problems. Again, it is important to remember the results vary partially because of different methodologies.

There are several studies which compare validity of the AAMR Adaptive Behavior Scales with other behavior rating scales. Bensburg and Iron (1986) compare the ABS:SE to the revised Vineland Adaptive Behavior Scale. "In general, teacher ratings in the area of community self-sufficiency (Factor II of the ABS:SE) correspond very highly with parent and teacher ratings on all three behavior domains of the Vineland Scales."

(Bensburg & Iron, 1986) Other studies have found more variance in the correlations. Lindholm and Touliatos (1982), examine reliability of scores across parents, school counselors, and teachers. Their research indicated that school counselors perceive more personality problems. "Further the correlations were moderate to low, with the mother-father agreements being higher than those of parent-teacher and teacher-counselor observations." (Lindholm & Touliatos, 1982) However, all of the research reviewed indicated a higher correlation when comparing scores on the same type rater (test-retest) than when comparing to different raters (e.g., Epstein & Niemen, 1983; Mayfield et al., 1984; Bensburg & Irons, 1986, and Cheramie, 1994). Researchers agree that ratings across time are stable. However, they disagree about the correlation across settings.

The articles in this review suggest many reasons for low to moderate agreement across settings. The differences may be due to situational behaviors which are displayed in different settings (Archer, Fisman, & Steiner, 1994 and Lindholm & Touliatos, 1982), differences in sensitivity to maladaptive behaviors (Archer, Fisman, & Steiner, 1994 and Epstein & Niemen, 1983), and parents are more emotionally involved, therefore less reliable (Touliatos & Lindholm, 1981). The reason for these differences remains unanswered. The question is, "what happens in a residential facility where all staff has the same training and are dealing with the subjects from the same background?"

Summary

The following conclusions are developed from the articles reviewed. First, the ABS-SE:2 is a reliable tool for use with a variety of populations; this includes individuals who are mentally retarded and who display behavioral problems. Further, it is identified that

Part One of this scale is more applicable in the diagnosis and screening of developmental functioning. On the other hand, Part Two provides information about social functioning and adjustment. Therefore, this scale is ideal for students who are dually diagnosed with behavior problems and mental retardation. Second, this clinical instrument has been compared to other behavior rating scales and according to the results it is a valid instrument. Third, test-retest reliability consistently shows correlations within the .80 and .90 range, thereby indicating stability across time. Fourth, there is a vast amount of research that examines across setting and inter-rater reliability with different samples and the correlations vary from low to high. There are a variety of factors suggested that play a role in the differences of ratings. It is questionable if there are true differences in the behavior displayed across settings or if other factors are involved. This researcher will examine differences in ratings across setting in a residential treatment facility. Thereby, it is assumed that all staff has the same training, the same emotional investment, and the same amount of exposure to the students' behaviors. It is proposed that any differences in ratings are environmental. These setting differences may be because of differences in the expectations, interactions with staff, and structure.

CHAPTER III

Sample

Subjects in this study are enrolled in the Behavior Disorders program at a residential treatment facility in the Pennsylvania suburbs. Sample selection is based on the following criteria: (a) age between 12-0 and 17-11; (b) IQ between 45 and 75; (c) full-time placement at the residential treatment facility for at least 30 days; and (d) full-time placement in the Behavior Disorders program.

Teachers and residential counselors completed the ABS-SE:2 on a total of thirty students. This study requires raters have observed the subjects' behavior during the last four weeks. Prior to completing the ABS-SE:2, small group instructions were provided by the researcher. This included information about scoring and rules for completion of the scale. Then, the first scale for each rater was completed via an interview. This was to ensure that all raters were familiar with completing the scale. Next, the researcher observed completion of the remaining scales to ensure uniformity. Mean age of the subjects is 15 years and three months with a range of twelve years and six months to seventeen years and eleven months. Average IQ is 60 with a range of 45 to 75. IQ's were measured with the following tests: Wechsler Intelligence Scale for Children 3rd edition (WISC III) on 50%, Wechsler Intelligence Scale for Children revised (WISC R) on 17%, Stanford-Binet Intelligence Scale (SBIS) on 13%, Slosson Intelligence Scale for Children (SISC) on 10%, Kaufman Assessment Battery for Children (K-ABC) on 7%, and Leiter International Performance Scale (LIPS) on 3%. There are 43% (n=13) males and 57% (n=17) females in this research. The average length of placement is two years with a

range of two months to four years and ten months. The sample descriptive information is described in *Table 3.1*. Also, descriptive frequency information is in *Table 3.2*.

Table 3.1
Sample Descriptive Information

#	M/ F	Age Yr./Month	IQ	IQ Test	Placement Length Yr./Month	Psychiatric Medication
1	F	17/9	68	WISC R	1/6	Depakote
2	F	15/1	52	WISC III	4/1	Desipramine
3	F	16/6	60	SISC	3/1	Ritalin
4	F	15/11	73	WISC III	1/9	Thorazine
5	F	17/3	74	WISC III	10	None
6	F	12/8	57	SBIS	1/1	Depakote
7	F	15/9	74	WISC R	9/3	None
8	F	13/10	75	K-ABC	0/2	Resperidal
9	F	15/2	52	WISC III	2/7	Ativan
10	F	15/10	66	WISC III	0/10	Haldol
11	M	12/6	63	WISC III	4/10	Mellaril/ Depakote
12	M	15/9	64	SBIS	1/10	None
13	M	16/1	54	WISC III	1/7	Tegretol Mellaril
14	M	14/6	60	WISC III	0/9	None
15	F	16/7	75	WISC R	2/9	None
16	F	13/7	52	WISC III	1/1	Paxil
17	F	16/10	49	WISC III	1/10	Mellaril
18	M	14/6	67	SISC	4/10	Haldol
19	M	13/8	63	WISC III	0/11	None
20	F	17/4	64	WISC R	3/2	Thorazine

21	M	16/2	48	WISC III	2/3	Haldol Loxitane
22	M	17/3	66	LIPS	3/7	Tegretol Mellaril
23	F	16/11	48	WISC R	1/11	Ritalin
24	F	17/11	45	SBIS (L-M)	0/10	None
25	M	16/2	64	WISC III	0/3	None
26	F	12/6	63	SBIS 4th	1/1	None
27	M	14/6	75	SISC	2/0	Mellaril
28	M	12/9	72	WISC III	2/0	Mellaril
29	M	13/6	68	WISC III	1/6	Elavil
30	M	13/9	51	K-ABC	3/9	None

Table 3.2
Frequency Distribution by Descriptive Variables

Variable	Frequency
Age and Gender	
12 to 13	9
Males ($n = 5$)	
Females ($n = 4$)	
14 to 15	9
Males ($n = 4$)	
Females ($n = 5$)	
16 to 17	12
Males ($n = 4$)	
Females ($n = 8$)	
Estimated intellectual ability	
45 to 49	4
50 to 54	5
55 to 59	1
60 to 64	8
65 to 69	5
70 to 75	7

Measurement Description

The AAMR Adaptive Behavior Scale-School: Second Edition is the 1993 revision of the 1981 Adaptive Behavior Scale School Edition (ABS-SE, Lambert, Windmiller, Tharinger, & Cole, 1981). Previous versions include the Adaptive Behavior Scale (ABS, Nihira, Foster, Shellhaas, and Leland, 1969, rev. 1974) and the Adaptive Behavior Scale Public School Version (ABS-PSV, Lambert, Windmiller, Cole, & Figueroa, 1975). Also, there is an Adaptive Behavior Scale Residential Counselor Edition, Second Edition (ABS-RC:2, Nihira, Leland, & Lambert, 1993) from which the ABS-SE:2 was abbreviated. The current study uses the ABS-SE:2 which is outlined in *Table 3.3*. The ABS-SE:2 is divided into two parts. Part One focuses on personal independence which evaluates coping skills. It has nine behavior domains (indicated by Roman numerals) and 18 subdomains (indicated by letters). Part Two of the scale describes social behavior which consists of seven behavior domains.

Scores are interpreted on two levels, Domain and Factor. Domain scores describe the performance within domains and it is useful in planning intervention programs. Factor scores are developed through factor analysis of the Domain scores across Parts I and Part II. However, this research will focus on Domain scores.

According to the *AAMR ABS-SE:2 EXAMINER'S MANUAL* (Lambert, Nihira, & Leland, 1993), this scale has four major uses with adaptive behavior. The first is to identify strengths and weaknesses between domains and factors. The second is to identify students who are significantly below their peers. The third is to document progress of individuals intervention programs. The fourth is its value in research studies.

Table 3.3
Outline of the AAMR ABS-SE:2 Domains

Part One	Behavior(s) Measured
I. Independent Functioning (IF)	
A. Eating	Self-help
B. Toilet use	
C. Cleanliness	
D. Appearance	
E. Care of clothing	
F. Dressing and undressing	
G. Travel	
H. Other independent functioning	
II. Physical Development (PD)	Sensory and motor
A. Sensory Development	
B. Motor Development	
III. Economic Activity (EA)	Financial management
A. Money handling and budgeting	
B. Shopping skills	
IV. Language Development (LD)	Expression/reception
A. Expression	
B. Verbal Comprehension	
C. Social Language Development	
V. Numbers and Time (NT)	Basic mathematics
VI. Prevocational/Vocational Activity (PVA)	Job-related skills
VII. Self-Direction (SD)	Active/passive lifestyles
A. Initiative	
B. Perseverance	
C. Leisure Time	
VIII. Responsibility (RE)	Dependability
IX. Socialization (SO)	Interpersonal relations
Part Two	
X. Social Behavior (SB)	Physical/emotional abuse
XI. Conformity (CO)	Severe nonconformity
XII. Trustworthiness (TR)	Antisocial behavior
XIII. Stereotyped and Hyperactive Behavior (SHB)	Behavior upsetting to others
XIV. Self-Abusive Behavior (SAB)	Self-injurious actions
XV. Social Engagement (SE)	Overly shy or nervous around others
XVI. Disturbing Interpersonal Behavior (DIB)	Bothersome personal behaviors

According to the EXAMINER'S MANUAL the ABS-SE:2 was standardized on two groups, mentally retarded (MR) individuals and non-mentally retarded (N-MR) individuals. The MR sample consisted of 2,074 students who were selected from 40 states. The N-MR sample consisted of 1,254 students who were selected from 44 states. Further, according to Lambert et al. (1993) this norminative sample was representative of the national population with regards to race.

Reliability refers to "the consistency with which any measuring device (e.g., assessment scale) estimates various attributes of something." (Lambert et al., 1993) Three types of reliability were reported in the EXAMINER'S MANUAL, internal consistency, stability reliability (test-retest), and inter-scorer reliability.

Internal consistency was investigated across domains and factors using coefficient alpha. Tables in the manual indicated that factor scores are the most reliable; they yield coefficients that exceed .90 in most instances for both standardization groups. Further, inspection of the averaged coefficients in the columns indicated that the ABS-SE:2 scores are sufficiently reliable because they exceeded .80 in all instances for both standardization groups. Also, standard error of measurement (SEM) was investigated. Review of the SEM tables in the manual indicate low SEM score, which supports a high degree of scale reliability.

Stability reliability is reviewed using the test-retest technique. The time interval between test administration is one to two weeks. According to Anastasi (1988) this form of reliability,

shows the extent to which scores on a test can be generalized over different occasions; the higher the reliability, the less susceptible the scores are to the random daily changes in the condition of the test takers or of the testing environment.

Review of the tables indicated that all but two of the corrected coefficients meet the .80 criteria and 26 meet the .90 criteria. "Thus we can conclude that the coefficients are of sufficient magnitude to suggest that the items of the ABS-SE:2 yield consistent results over time." (Lambert, 1993)

The third type of reliability reviewed is inter-scorer. Reviews of the tables indicated a range of correlation coefficients between .96 and .99 which means there is sufficient agreement between scorers.

Design

Consent forms (Appendix A) to participate in this study were delivered and mailed to 46 students and 46 parents/guardians. A total of 82 (89.1 %) signed permission forms were returned. This included 38 students (82.6 %) and 44 parents/guardians (95.6 %). Following the receipt of a signed release, students were selected that had a complete set of consents and met the eligibility requirements.

In order to determine the relationship of the ratings across settings, Pearson product-moment correlation coefficients, r , are calculated on domain scores.

Summary and Hypotheses

In summary, this research project will investigate relationship between settings (i.e., school and residence) on the AAMR Adaptive Behavior Scale School Second Edition on behavior disorder students residing in a residential treatment facility. There are

two types of raters utilized in this study; they are residential counselors and teachers. Subjects are selected based on meeting minimum criteria with regards to age, length of placement, IQ, and full-time participation in the Behavioral Disorders program.

The ABS-SE:2 consist of two parts. Part One focuses on personal independence and the students' ability to cope with the environment. Part Two focuses on social behavior and the students' ability to handle social situations. There are two types of scores generated with this measurement; they are domain scores and factor scores. Domain scores provide information within the nine domains on Part One and the seven domains on Part Two.

The hypothesis is it is for a significant correlation ($p > .05$) between settings (i.e., school and residence) on the ABS-SE:2 domain scores on behavior disordered students residing in a residential treatment facility.

CHAPTER IV

Restatement of Hypothesis

In this study, it was predicted that there would be significant correlation between the residence and the school ABS-SE:2 scores at the .05 level ($p < .05$).

Analysis of Results

Results of Domain Score Correlations Across Settings Correlations of the sixteen Domains across the school and the residence are presented in *Table 4.1*. Correlations were computed using pearson product moment correlation coefficients (r). Domains that were significant at the .05 level ($p < .05$) were notated by an asterisk. Significant correlations were obtained on seven of the sixteen Domains. Four of the Domain scores in Part One were significant, Independent Functioning, Physical Development, Economic Activity, and Responsibility. On the other hand, three Domain scores on Part Two were significant, Social Behavior, Trustworthiness, and Disturbing Interpersonal Behavior. The range r on both parts was .019 to .775 with a mean r of .336. The range of r on Part I was .019 to .669 with a mean r of .287. The range of r on Part II was .152 to .775 with a mean correlation of .401. This data indicated the mean r for Part One was not significant at the .05 level. On the other hand, the mean r for Part II was significant at the .05 level. Also, the correlation range on Part II is smaller than the range on Part I Domain Scores.

The difference in mean correlation scores on Part I and Part II could have been an indication of the raters and population. Part Two scores describe social behavior and are a better indication of identifying individuals with behaviors the are significantly below

Table 4.1
Correlation and Significance of Domain Scores
p<.05

Domains	Correlations (r)	Probability (p)
Independent Functioning	.669	*.000
Physical Development	.473	*.008
Economic Activity	.412	*.024
Language Development	.041	.830
Numbers and Time	-.047	.807
Pre/Vocational Activity	.093	.624
Self-Direction	.019	.920
Responsibility	.536	*.002
Socialization	.292	.118
Social Behavior	.371	*.044
Conformity	.357	.053
Trustworthiness	.775	*.000
Stereotypic and Hyper Behavior	.310	.095
Self-Abusive Behavior	.348	.060
Social Engagement	.152	.422
Disturbing Interpersonal Behavior	.491	*.006

* = probability of significance at the .05 level (p=.05)

and above the mean. It is interesting that these scores were more homogeneous. In other words, the special education teachers and residential counselors ratings were less variable when compared to Part One which is a measurement of personal independence and individual coping skills.

Results of Mean Scores and Mean Variance In *Table 4.2* and *Figure 4.1* mean Domain scores are indicated across the school and the residence. Higher scores are in bold print highlighted on *Table 4.2*. It was interesting to note that teachers mean scores were higher on the following five Part One Domains: Independent Functioning, Physical Development, Economic Activity, Language and Development, and Self-Direction. These areas are typical of what special education teachers in this environment assess. Further, the remaining Part One Domains (Numbers and Time, Pre/Vocational Activity, Responsibility, and Socialization) had means that closely resemble the residential counselor scores. On the other hand, residential counselors rated higher on the Part Two Domains with the exception of Self-Abusive Behavior which display little variance (.83) from the teachers mean score. Higher ratings on Part Two are an indication of more maladaptive and socially inappropriate behaviors. This could be indicative of the decrease in demands and structure in the residence in comparison to the school. Typically, students with dual diagnosis perform better with a highly structured environment which provides consistent demands. Therefore, it is possible more maladaptive behaviors are displayed in the residence.

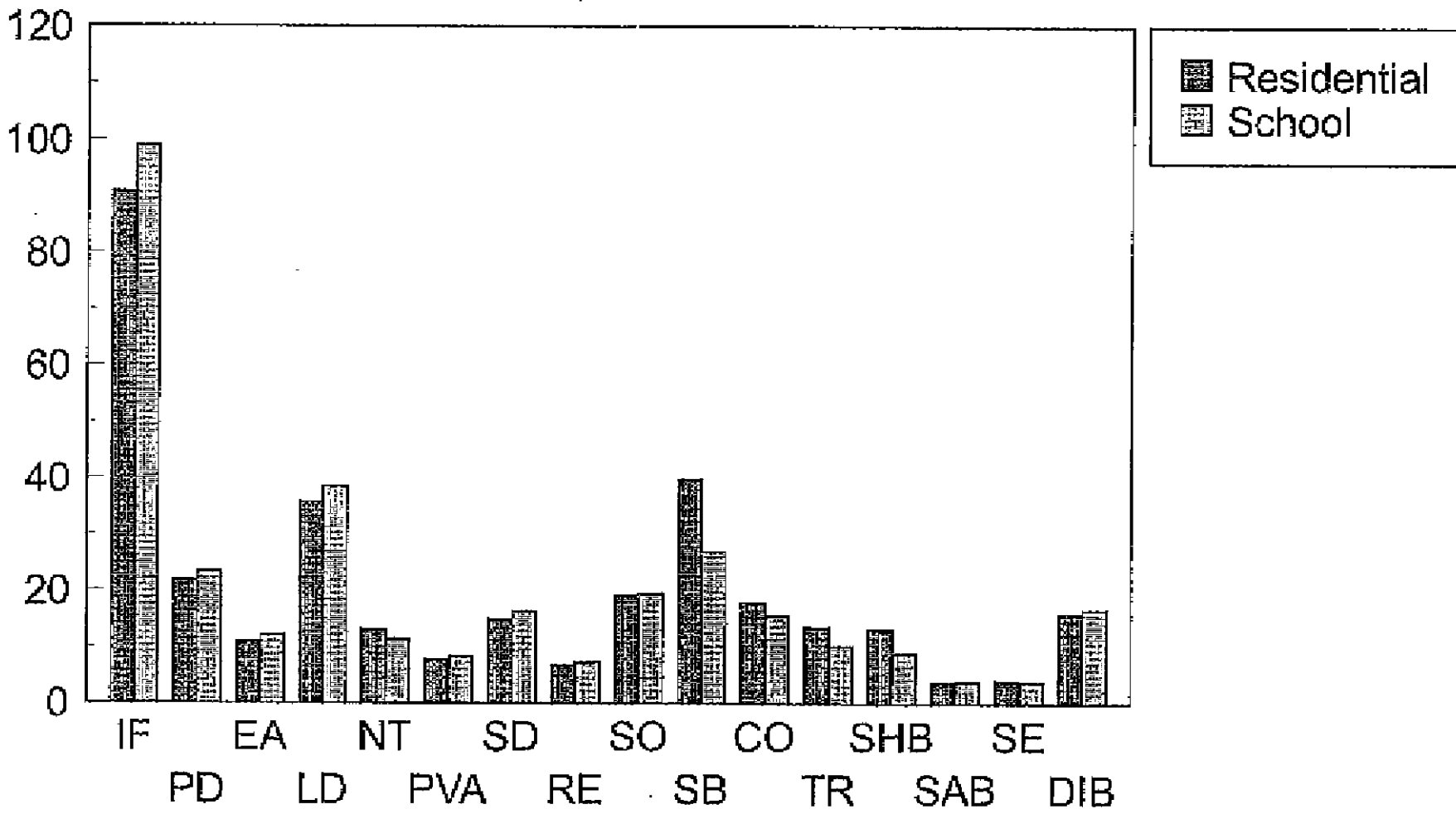
Summary

The following findings were indicated in this chapter. First, there were significant correlations on seven of the sixteen Domains. Second, review of the mean correlations on Part One and Part Two scores indicates that Part One scores have higher correlations. Also, residential counselors rated higher on four Part One Domains and six Part Two Domains.

Table 4.2
Mean Scores and Mean Variance

Domain	Residential Scores		School Scores	
	Mean	Range	Mean	Range
Independent Functioning	90.40	45 - 127	99.00	45 - 119
Physical Development	23.33	15 - 30	23.40	21 - 25
Economic Activity	11.40	0 - 25	12.03	1 - 37
Language Development	38.00	23 - 80	38.43	22 - 71
Numbers and Time	13.37	4 - 61	11.87	0 - 14
Pre/Vocational Activity	8.33	2 - 24	8.30	2 - 12
Self-Direction	16.37	6 - 23	17.93	5 - 55
Responsibility	7.43	2 - 10	7.37	3 - 11
Socialization	20.70	7 - 40	19.87	12 - 26
Social Behavior	39.17	0 - 65	26.87	4 - 62
Conformity	19.13	0 - 46	15.73	0 - 45
Trustworthiness	13.67	0 - 67	9.87	0 - 38
Stereotyped/Hyper Behavior	12.07	0 - 47	8.93	0 - 32
Self-Abusive Behavior	3.07	0 - 14	3.90	0 - 19
Social Engagement	4.23	1 - 17	3.77	0 - 19
Disturbing Interpersonal Behavior	17.10	0 - 45	16.57	0 - 46

Figure 4.1
MEAN SCORES



CHAPTER V

Summary

The purpose of this study was to provide information about the relationship between ratings of adaptive behavior of subjects residing at a residential treatment facility.

Specifically, this research focuses on the correlation of scores on the American Association on Mental Retardation's Adaptive Behavior Scale-School Second Edition (ABS-SE:2) across the residence and school settings.

Subjects consisted of thirteen males and seventeen females who participate in a Behavior Disorders program. These subjects are considered dually diagnosed because of their mental retardation and behavioral/emotional diagnoses. In this study, the hypothesis was for significant ($p < .05$) correlation of scores in the residence and the school. Each subject was rated on the sixteen Domains within the ABS-SE:2 by their teacher and residential counselor. The first scale for each teacher and residential counselor was completed in small group format ($n = 3-5$) following group instructions. The remaining scales were completed in small groups and were supervised by the researcher to ensure uniformity of data.

Previous research on adaptive behavior scales has resulted in mixed findings with reliability across settings. This is due in part to problems and differences with methodology. First, there are four versions and editions of the AAMR ABS that have been utilized in research within the last twenty years. Second, differences exist in the subject diagnosis. For example, subjects were included with a range of mental retardation (severe to non-mentally retarded) and classifications (e.x. conduct disorder).

Further, correlations between settings (home and school) in previous research have ranged from low to high. About half of the research indicated significant correlation between parent and teacher scores. On the other hand, about half of previous research indicated an insignificant relationship between parent and teacher scores.

Pearson product moment correlation coefficients (r) were used to compute significance for the sixteen Domain scores between the two settings. Significance was found on seven of the sixteen Domains. Also, mean scores for each Domain were computed to provide comparison between the two settings.

Conclusion

The following conclusions were made about the results. First, there were significant correlations on seven of the sixteen Domains. Second, review of the mean correlations on Part One and Part Two scores indicated that Part One scores have higher correlations. Third, residential counselors rated higher on four Part One Domains and six Part Two Domains.

Discussion

There are many factors and variables that can affect any research. This section will explore variables that have a potential affect on the results. Also, it will take a closer look at the individual subject scores and profiles and their potential effects on the findings. This study consisted of raters that are considered equal in training, emotional investment, exposure to the scale, and experience in dealing with the contained subjects. Yet, the hypothesis was not met on all of the Domains as projected. While taking into account the limitations as discussed in Chapter I, there are several potential reasons for score

differences. First, it is possible that the subjects' behaviors are situation-specific. It is possible that students express different behaviors in the school and in the residence. This could be related to several factors. It is possible that the subjects respond to the differences in structure. Although this facility provides a structured environment, the school regiment is more structured than the residence. Therefore, it is possible that residential counselors rated higher on six of the seven Part Two Domains because there are more problematic behaviors are observed in the residence. Also, it is possible that there are fewer behavior problems in the school because of the higher staff to student ratio. The average school ratio is 2:7, whereas the average residence ratio is 1:5. Second, it is possible that the scores did correlate on nine Domains because of staff bias and differences in the value and perceptions of behaviors measured. This is especially true in Part Two of the scale. This part consisted of frequency ratings of maladaptive behaviors. The scale consisted of the following ratings (1) occasionally (2) frequently (3) never. This type of rating can be affected by the raters perceptions of that behavior. For example, there is a question that asks if the student "prefers to be alone." The answer is affected by the raters value and their own perceptions of this characteristic. If the rater prefers to be alone, then they may not perceive this behavior as excessive and may give a lower rating. Third, raters often remarked about the difficulty in rating certain items. These comments were mostly made by residential counselors on Part One items. Teachers appeared more confident about both parts of the scale. This could partially be due to the emphasis on functional academics at this facility. Therefore, teachers have as much exposure to daily living skills (e.g., laundry) as the residential staff. On the other hand,

residential counselors had a lot of difficulty in rating items that are more academic on Part One. For example, several raters expressed difficulty in rating students' ability to tell time on a variety of devices and identification of their current reading level.

Previous researchers have indicated a variety of reasons for differences in the ratings between teachers and parents. Cheramie (1994) indicated that when variables such as experience and exposure to the scale are controlled then differences in ratings are more likely due to setting differences than rater bias. This seems to be the general consensus for researchers that failed to find significant correlation on a majority of the Domains.

Review of the individual scores provides information that is valuable in this study. For this section it is important to remember that higher scores on Part One are indicative of more effective coping skills and personal independence. On the other hand, lower scores on Part Two are indicative of more socially appropriate and adaptive behaviors. Review of the raw scores by column in Appendix B highlights scores that vary further from the mean than most scores. However, review of the raw scores by subject (row) highlights students that consistently are rated higher or lower than their peers. Through these means, students that consistently were rated differently from their peers are identified.

In the residential scores, subject # 11 consistently had the lowest ratings on Part One and Part Two. In other words, this subject was consistently rated lower than the mean on Part One and rater higher than the mean on Part Two. Across several Domains these scores were at the end of the range, thereby having an impact on the range calculations.

In the school and residential scores, subjects # 26, # 6, # 21, # 22, and # 7 consistently impacted on the ranges. Subjects # 26 and # 6 were consistently rated lower on Part One.

For example, subject # 26 had the following scores on Independent Functioning: 45 on in the school and 49 in the residence. Clearly, these scores are well below means score of 99.00 and 90.40 respectively. Also, subjects # 21 and # 22 consistently had the highest scores on Part Two. In other words, these subjects had more socially inappropriate and maladjusted behaviors when compared to other subjects in the sample. For example, the following ratings were obtained on Trustworthiness for subject # 22, 38 in the school and 67 in the residence. Again, these scores were well above mean scores of 9.87 and 13.67 respectively. Also, subject # 7 consistently scored lowest on Part Two Domains across both settings. Most scores for this subject were between zero and two. These subjects significantly affected the Domain ranges, thereby giving a distorted representation variability within the data.

Implications for Future Research

In addition to correcting for this studies limitations as listed in Chapter 1, there is a need to consider other corrective measures. First, it is suggested that careful consideration is made in the selection of a homogenous sample. In this study, what appeared to be a group classification, actually consisted of a variety of diagnosis. For example, some students had mental health issues in addition to their behavioral disorder and mental retardation. Also, a smaller IQ range would allow future researchers to have a more consistent sample. Second, it might be helpful for future researchers to include analysis of items that were difficult to rate. In addition, information about significant differences (e.g., t tests) of the scores would provide more information about variability. Finally, there is a need to replicate this study and other correlation studies with the ABS-SE:2 to determine

generability of the results. Further, there is still a need to provide correlation and reliability information about adaptive behavior scales in residential treatment facilities.

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APPENDICES

APPENDIX B: RAW DATA

Key

Setting 1		Setting 2		
School		Residence		
if	=	if ²	=	Independent Functioning
pd	=	pd ²	=	Physical Development
ea	=	ea ²	=	Economic Activity
ld	=	ld ²	=	Language Development
nt	=	nt ²	=	Numbers and Time
pva	=	pva ²	=	Prevocational/Vocational Activity
sd	=	sd ²	=	Self-Direction
r	=	r ²	=	Responsibility
s	=	s ²	=	Socialization
sb	=	sb ²	=	Social Behavior
c	=	c ²	=	Conformity
t	=	t ²	=	Trustworthiness
shb	=	shb ²	=	Stereotyped and Hyperactive Behavior
sab	=	sab ²	=	Self-Abusive Behavior
se	=	se ²	=	Social Engagement
dib	=	dib ²	=	Disturbing Interpersonal Behavior

	setting	if	pd	ea	ld	nt	pva	sd
1	1.00	96.00	24.00	12.00	39.00	12.00	7.00	14.00
2	1.00	116.00	24.00	15.00	43.00	13.00	9.00	14.00
3	1.00	109.00	22.00	19.00	43.00	14.00	11.00	19.00
4	1.00	113.00	22.00	14.00	42.00	13.00	11.00	21.00
5	1.00	104.00	24.00	14.00	39.00	14.00	11.00	22.00
6	1.00	67.00	24.00	1.00	22.00	6.00	7.00	5.00
7	1.00	116.00	22.00	18.00	43.00	14.00	11.00	21.00
8	1.00	93.00	24.00	3.00	36.00	9.00	4.00	5.00
9	1.00	106.00	23.00	7.00	32.00	10.00	11.00	19.00
10	1.00	95.00	23.00	37.00	71.00	14.00	5.00	15.00
11	1.00	83.00	23.00	4.00	29.00	9.00	5.00	8.00
12	1.00	102.00	24.00	13.00	38.00	11.00	11.00	16.00
13	1.00	93.00	24.00	16.00	42.00	13.00	7.00	17.00
14	1.00	108.00	24.00	17.00	42.00	14.00	11.00	23.00
15	1.00	109.00	24.00	16.00	42.00	14.00	11.00	23.00
16	1.00	117.00	24.00	20.00	43.00	14.00	11.00	22.00
17	1.00	104.00	24.00	7.00	34.00	10.00	10.00	21.00
18	1.00	108.00	23.00	16.00	42.00	13.00	10.00	14.00
19	1.00	78.00	21.00	8.00	39.00	12.00	2.00	16.00
20	1.00	97.00	24.00	13.00	40.00	13.00	9.00	23.00
21	1.00	83.00	24.00	8.00	36.00	9.00	5.00	6.00
22	1.00	73.00	24.00	3.00	36.00	6.00	3.00	6.00
23	1.00	117.00	24.00	8.00	34.00	11.00	8.00	16.00
24	1.00	107.00	23.00	11.00	37.00	13.00	8.00	18.00
25	1.00	116.00	24.00	16.00	37.00	12.00	12.00	17.00
26	1.00	45.00	20.00	2.00	27.00	6.00	3.00	55.00
27	1.00	102.00	24.00	10.00	40.00	12.00	6.00	18.00
28	1.00	109.00	24.00	15.00	36.00	10.00	7.00	16.00
29	1.00	105.00	25.00	14.00	39.00	8.00	12.00	25.00
30	1.00	119.00	23.00	5.00	28.00	13.00	11.00	23.00

	r	s	sb	c	t	shb	sab	se
1	8.00	19.00	36.00	3.00	7.00	.00	1.00	4.00
2	9.00	22.00	29.00	23.00	5.00	1.00	.00	.00
3	8.00	22.00	15.00	13.00	5.00	4.00	3.00	2.00
4	8.00	17.00	39.00	20.00	9.00	12.00	4.00	2.00
5	10.00	25.00	16.00	3.00	.00	.00	.00	7.00
6	3.00	16.00	39.00	28.00	14.00	31.00	8.00	6.00
7	9.00	25.00	7.00	1.00	.00	2.00	.00	.00
8	7.00	16.00	23.00	21.00	5.00	5.00	3.00	9.00
9	10.00	21.00	27.00	7.00	4.00	5.00	4.00	3.00
10	6.00	18.00	59.00	37.00	17.00	13.00	16.00	.00
11	4.00	16.00	41.00	18.00	21.00	18.00	8.00	5.00
12	11.00	14.00	12.00	2.00	2.00	15.00	5.00	8.00
13	8.00	22.00	13.00	10.00	2.00	1.00	.00	3.00
14	8.00	23.00	18.00	8.00	.00	5.00	.00	.00
15	8.00	23.00	18.00	13.00	30.00	1.00	.00	.00
16	8.00	26.00	26.00	18.00	3.00	1.00	.00	.00
17	8.00	21.00	26.00	18.00	2.00	4.00	3.00	.00
18	8.00	20.00	10.00	6.00	6.00	.00	.00	12.00
19	7.00	20.00	40.00	24.00	9.00	19.00	4.00	3.00
20	7.00	21.00	4.00	.00	.00	.00	1.00	5.00
21	5.00	15.00	42.00	25.00	33.00	32.00	9.00	19.00
22	3.00	12.00	62.00	45.00	38.00	27.00	19.00	10.00
23	8.00	19.00	23.00	9.00	9.00	14.00	2.00	8.00
24	9.00	19.00	12.00	7.00	6.00	5.00	3.00	2.00
25	8.00	21.00	33.00	18.00	5.00	10.00	.00	1.00
26	4.00	16.00	19.00	9.00	10.00	13.00	2.00	2.00
27	8.00	18.00	29.00	18.00	22.00	9.00	2.00	2.00
28	6.00	20.00	45.00	41.00	21.00	8.00	.00	.00
29	7.00	23.00	18.00	18.00	.00	9.00	5.00	.00
30	8.00	26.00	20.00	7.00	11.00	4.00	15.00	.00

	dib	setting2	if2	pd2	ea2	ld2	nt2	pva2
1	24.00	2.00	83.00	24.00	8.00	39.00	13.00	3.00
2	20.00	2.00	109.00	23.00	9.00	39.00	10.00	10.00
3	8.00	2.00	100.00	23.00	22.00	36.00	13.00	10.00
4	18.00	2.00	110.00	24.00	22.00	34.00	14.00	9.00
5	7.00	2.00	115.00	24.00	23.00	40.00	14.00	10.00
6	34.00	2.00	80.00	23.00	2.00	23.00	4.00	3.00
7	11.00	2.00	111.00	22.00	23.00	37.00	14.00	11.00
8	25.00	2.00	98.00	24.00	2.00	38.00	9.00	4.00
9	6.00	2.00	98.00	23.00	5.00	33.00	9.00	10.00
10	31.00	2.00	104.00	24.00	6.00	41.00	14.00	9.00
11	17.00	2.00	45.00	22.00	5.00	30.00	9.00	7.00
12	25.00	2.00	68.00	24.00	15.00	38.00	11.00	9.00
13	9.00	2.00	113.00	24.00	12.00	41.00	13.00	10.00
14	9.00	2.00	113.00	24.00	15.00	41.00	13.00	7.00
15	7.00	2.00	111.00	24.00	15.00	43.00	14.00	9.00
16	10.00	2.00	110.00	23.00	10.00	36.00	11.00	8.00
17	7.00	2.00	98.00	24.00	8.00	40.00	14.00	8.00
18	13.00	2.00	79.00	23.00	8.00	37.00	14.00	2.00
19	19.00	2.00	117.00	24.00	16.00	43.00	14.00	11.00
20	.00	2.00	70.00	23.00	12.00	32.00	13.00	5.00
21	38.00	2.00	101.00	23.00	7.00	35.00	9.00	24.00
22	46.00	2.00	107.00	27.00	10.00	39.00	61.00	7.00
23	15.00	2.00	95.00	23.00	13.00	38.00	13.00	10.00
24	22.00	2.00	96.00	24.00	8.00	25.00	10.00	8.00
25	.00	2.00	117.00	20.00	18.00	40.00	12.00	11.00
26	2.00	2.00	49.00	15.00	.00	80.00	13.00	3.00
27	18.00	2.00	103.00	27.00	10.00	42.00	10.00	4.00
28	25.00	2.00	111.00	30.00	15.00	36.00	10.00	9.00
29	36.00	2.00	94.00	22.00	14.00	36.00	11.00	9.00
30	.00	2.00	127.00	20.00	9.00	28.00	12.00	11.00

	sd2	r2	s2	sb2	c2	t2	shb2	sab2
1	9.00	5.00	14.00	58.00	32.00	8.00	12.00	3.00
2	21.00	10.00	23.00	29.00	26.00	9.00	18.00	4.00
3	15.00	6.00	16.00	51.00	32.00	16.00	12.00	3.00
4	19.00	9.00	23.00	33.00	23.00	9.00	9.00	4.00
5	23.00	10.00	24.00	9.00	12.00	2.00	3.00	.00
6	12.00	8.00	15.00	64.00	27.00	24.00	30.00	12.00
7	17.00	10.00	24.00	7.00	2.00	.00	2.00	.00
8	15.00	7.00	23.00	30.00	22.00	13.00	15.00	.00
9	19.00	10.00	25.00	37.00	18.00	11.00	6.00	6.00
10	19.00	7.00	22.00	37.00	15.00	8.00	7.00	8.00
11	6.00	2.00	7.00	65.00	31.00	38.00	47.00	14.00
12	16.00	8.00	23.00	14.00	9.00	1.00	2.00	1.00
13	21.00	8.00	26.00	21.00	22.00	6.00	.00	1.00
14	19.00	8.00	25.00	9.00	3.00	3.00	.00	.00
15	22.00	10.00	26.00	36.00	19.00	25.00	12.00	1.00
16	21.00	10.00	23.00	29.00	19.00	3.00	11.00	4.00
17	11.00	8.00	20.00	19.00	18.00	3.00	4.00	2.00
18	12.00	5.00	17.00	33.00	24.00	10.00	18.00	4.00
19	23.00	10.00	23.00	.00	.00	.00	.00	.00
20	8.00	5.00	15.00	31.00	18.00	26.00	34.00	9.00
21	6.00	8.00	11.00	55.00	46.00	35.00	28.00	12.00
22	18.00	9.00	23.00	22.00	20.00	67.00	3.00	.00
23	20.00	9.00	21.00	14.00	7.00	1.00	17.00	3.00
24	13.00	7.00	40.00	7.00	4.00	5.00	2.00	4.00
25	16.00	7.00	20.00	33.00	15.00	5.00	11.00	.00
26	7.00	2.00	14.00	44.00	32.00	37.00	26.00	10.00
27	20.00	8.00	19.00	31.00	20.00	22.00	10.00	2.00
28	18.00	4.00	18.00	47.00	40.00	20.00	10.00	2.00
29	22.00	8.00	16.00	33.00	12.00	2.00	7.00	5.00
30	20.00	8.00	25.00	16.00	6.00	11.00	4.00	6.00

	se2	dib2
1	6.00	33.00
2	10.00	22.00
3	4.00	13.00
4	1.00	15.00
5	1.00	7.00
6	2.00	28.00
7	1.00	14.00
8	5.00	13.00
9	.00	21.00
10	3.00	20.00
11	9.00	13.00
12	4.00	6.00
13	.00	11.00
14	.00	1.00
15	1.00	9.00
16	6.00	12.00
17	13.00	10.00
18	4.00	18.00
19	5.00	4.00
20	11.00	5.00
21	10.00	45.00
22	.00	18.00
23	5.00	25.00
24	1.00	35.00
25	5.00	.00
26	17.00	39.00
27	1.00	22.00
28	2.00	25.00
29	.00	28.00
30	.00	1.00

APPENDIX A: CONSENT FORMS

Subject Consent Form

Study Subject: Review Reliability of the Adaptive Behavior Scale School: Second Edition

Investigator: Simone Bey (431-8114)

I am being asked to help Simone Bey in a project. The first goal of this project is to make sure information reported on the above scale is reliable across school and the residence. The second goal is to make sure the scale is reliable with the same rater. The information on this scale is used to support the selection of my Individual Education and Individual Program goals.

If I decide to participate, I will not be directly involved. However, my scores will be examined and reported as part of a research project. At no time will my name or initials be used in identification.

This project has been explained to me and I have been allowed to ask questions about it. I understand that I do not have to fill out any papers. I have read this form and understand the project and I agree to participate.

Student's Name (PRINT) _____

Student's Signature _____

Date: _____

Parent/Guardian Consent Form

I am requesting permission for your son or daughter to participate in a study that is examining reliability of a measurement currently used at our facility. The measurement is the Adaptive Behavior Scale School: Second Edition. Currently, it is used to assess the adaptive functioning (e.g., daily living skills) of students at Kanner Center. This project will compare teacher and residential counselors' ratings across school and the residence.

What is involved?

Your son or daughter is not directly involved in the project. I will assist the teachers and residential counselors in completion of the scale, based on their knowledge of the student's skills. In two weeks a select few will complete the scale a second time. I am looking for reliability of the raters as well as the reliability of the ratings across settings.

Potential Benefits and Concerns:

Please review the confidentiality portion. One possible benefit is to ensure the reliability of the scale, therefore making the IPP/IEP goals more effective. If reliability is low, then treatment team members at Kanner can develop a plan of correction to ensure reliability.

Questions?

If there are any questions, please feel free to contact me at 610/431-8114 during the day.

Please remember participation is voluntary. ALL RECORDS ARE MAINTAINED UNDER LOCK. AT NO TIME WILL NAMES OR INITIALS BE USED. STUDENT'S WILL ONLY BE IDENTIFIED BY NUMBERS. Other descriptive information (e.g., age) will be used for sorting purposes only.

There is a stamped envelope for your convenience. Or you may fax this to 610/431-8105. Thank you for your consideration and prompt response.

Sincerely,

Simone Bey

I have read and I understand the permission letter. I give consent for my teenager to participate in this study.

Parent/Guardian (PRINT NAME) _____

Parent/Guardian (SIGNATURE) _____

Date: _____